

RACIAL PROFILING DATA ANALYSIS STUDY

Final Report for the San Antonio Police Department



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December, 2003

LAMBERTH CONSULTING

Lamberth Consulting was formed in 2000 in an effort to provide racial profiling assessment, training, and communication services to universities, states, counties, cities, civil rights groups, litigators, and communities.

Dr. John Lamberth, CEO and founder of Lamberth Consulting, developed the nation's first racial profiling methodology in 1993. Since that time we have revised and adapted our methodology for highways, urban areas, suburban areas, and pedestrian populations. We have expanded our service offerings to include training solutions targeted towards law enforcement and community members, as well as communication planning services to help educate and inform all parties concerned about racial profiling issues.

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The logo for Lamberth Consulting features the company name in a bold, dark red serif font. The text is centered and flanked by two horizontal lines that extend to the left and right. At the end of each line is a small square, with the right square being slightly higher than the left one, creating a stylized graphic element.

PROJECT TEAM

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In 1993 Dr. Lamberth developed the first methodology used in the country to determine whether racial profiling was occurring. In *New Jersey v. Soto*, the Court relied upon his research methodology and statistical analysis in determining whether racial profiling occurred on the New Jersey Turnpike. In 1999, the Attorney General of New Jersey agreed that the New Jersey State Police were practicing racial profiling (Interim Report of the State Police Review Team Regarding Allegations of Racial Profiling @ www.state.nj.us/lps/intm_419.pdf). Since that time he has intensified his work in the area of racial profiling, assisting in litigation, and assisting police departments who are interested in voluntarily determining whether racial profiling is occurring in their jurisdictions.

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ACKNOWLEDGEMENTS

We would like to thank the San Antonio Police Department (SAPD) for their support and cooperation during the course of this study. From the beginning of the effort, we were able to call upon the resources of the Department for the components that are necessary to complete a study of this nature. For a period of seven weeks we had surveyors out on the streets of San Antonio at all hours of the day or night. There were certain areas in which security was required for the surveyors, particularly at night. The Department provided that security which allowed the surveyors to concentrate on their basic task, which was accurately determining the race/ethnicity of motorists and pedestrians. At other times the ambient light was insufficient to allow for the accurate determination of race/ethnicity. Under those conditions, the Department provided supplemental lighting, either in the form of alley lights on a patrol car or brighter auxiliary lighting. Each benchmark location was observed both in daylight and at night and SAPD personnel accompanied us on many of those observational trips.

We worked closely with members of the Research and Planning Unit to understand both traffic and pedestrian patterns and enforcement. They provided us with information about police activity, special deployments, special circumstances within the City that influenced policing, and many other aspects of their work that would be necessary for us to understand when conducting this study. We thank them for their willingness to share their knowledge of this jurisdiction with us.

The successful identification of benchmark locations and of stop data that accurately reflects traffic in that location is essential to the successful completion of a study of racial profiling. The personnel of the Department who were assigned to this project worked and shared

their insight and experience with us and helped to make the study run smoothly. Completing a project of this magnitude in the time frame allotted required superior cooperation from the Department, which we greatly appreciate.

It is impossible to thank everyone who assisted in this project, but we would particularly like to thank Chief Albert A. Ortiz for his support, and Assistant Chief Tyrone Powers, Deputy Chief Jeffrey Page, and Captain Mahala Ritchey who were instrumental in the successful completion of the project. We would like to thank Lieutenant Quinton Lashbrook for his guidance during the project and his help in providing us the resources necessary to complete the project on time. We would also like to extend thanks to Sergeant Anthony Trevino, whose hands-on assistance throughout the project proved invaluable. Detective Ernie Kroeger, Officer Sal Saldana, Officer Carlos Torres, and Officer Brian Bielefeld escorted us and the surveyors throughout the City, and shared with us helpful information about the jurisdiction. Dr. Carla Zainie, Deborah Segovia, Sonya Groves, Bart Mulcahy and James Glass of the Research and Planning Unit were instrumental in the success of the project by providing assistance and resources for benchmarking, data analysis and transfer.

We would also like to thank the individuals of the RFQ selection committee for their critical review of the approach to conduct this study. These members included, Officer Ben Esquivel (SAPD), Officer Rafael Trinidad (SAPD), Sergeant Romana Lopez (SAPD), Lieutenant Mark Christian (SAPD), Captain Harry Griffin (SAPD), Trooper Rudy Zarate (Department of Public Safety), Deputy Steven Emerson (Bexar County Sheriff), Deputy Richard Esqueda (Bexar County Sheriff).

Finally, we would like to thank the SAPD for collecting both Tier 1 and Tier 2 data in the first year of data collection. The collection of these data allowed for a much more complete analysis of the data to occur.

EXECUTIVE SUMMARY

The past decade has seen increased awareness of the racial profiling issue among lawmakers, law enforcement agencies, and the communities in which they work. To address the issue, many agencies have begun collecting stop data, and analyzing the data to determine if racial profiling is occurring in their jurisdiction. Some collection and analysis efforts are due to threats of litigation or settlements, others have been voluntary in nature, while still others have been legislatively mandated. The SAPD data collection efforts were legislatively mandated. However, this data analysis study was conducted on a voluntary basis. One of the major issues in data analysis to date has been in determining the appropriate benchmark or standard to which the stop data are compared. The methodology employed in this study is one that has been employed in several studies across the country. This methodology employs what we believe to be the only appropriate benchmark for such an analysis: a measure of the driving population in the local area.

This study addressed the following questions:

- Is there evidence of racial profiling in San Antonio?
- Which minority groups (i.e., Blacks and Hispanics), if any, are targeted?
- In which locations is profiling likely to occur?
- Does post-stop activity indicate profiling?
- Are there special circumstances that might be interpreted as biased policing?

The SAPD began collecting data in January of 2002 and the result of the analysis of the first year of data is reflected in this report. Data on the transient population was collected at 41 locations throughout the city of San Antonio. These locations were selected due to the high

number of stops at each, traffic patterns that were relatively representative of the jurisdiction, as well as accessibility for surveyors. Traffic surveys on randomly selected days and times at each location were conducted over a seven-week period by highly trained surveyors. These surveys provided the benchmark data to which stop data for that location was compared.

The results of this study are among the “best” that we have seen in our work around the country. They provide virtually no evidence for targeting of either Blacks or Hispanics in San Antonio. At most locations the proportion of Black and Hispanic stops were very close to what one would expect based upon their presence in the transient population. In some locations, the proportion of Black or Hispanic stops was high enough to warrant a review of stops at that location by the department. Conversely, there were a number of the areas in which the number of Black or Hispanic motorists stopped was lower than would be expected on the basis of their presence in the transient population. It also should be mentioned that the disparities in both Black and Hispanic stops identified in this study are lower than those found in studies of most other jurisdictions.

In addition, consensual searches were reviewed in detail to determine if minority motorists were being treated differently after a stop had occurred. The searches of Hispanics indicated no evidence of any targeting of Hispanic motorists. The percentage of Black motorists consensually searched appears higher than would be expected. Three possible reasons for this elevation are discussed. First, half of the searches of Blacks occurred in the East District, an area that has one of the highest number of officers per capita in the city. Secondly, there were an increased number of Black motorists stopped by Directed Patrols in target areas of the City. Since Directed Patrols are about twice as likely to consensually search a motorist as are other patrols, this would also increase the percentage of Black motorists searched. Third, the

percentage of Black individuals on probation or parole is also higher than the overall population of Blacks in the city. Motorists on probation or parole are more likely to be searched. While we cannot quantify how much these three reasons would increase the proportion of Black motorists who would be consensually searched, we believe that it would have a substantial effect. Further the evidence suggests that Blacks are not being targeted for searches due to the time taken to conduct searches. Unlike at least one other jurisdiction, Black motorists were actually searched for a slightly shorter time than either Whites or Hispanics.

INTRODUCTION

Representatives from minority groups will provide anecdotal evidence of racial profiling on the roadways spanning back decades, however, the specific measurement of the practice by law enforcement agencies was not formalized until 1994. During the criminal litigation case in New Jersey (*State v. Soto et al.*), a group of defendants alleged that New Jersey State troopers were targeting and stopping minorities on the highway, not because of their driving behavior, but because of the color of their skin. During the course of this case the race and ethnicity of the driving population was observed and recorded on portions of the New Jersey State Turnpike (Lamberth, 1994.) The driving population then was compared to the racial and ethnic make-up of the individuals stopped in New Jersey to determine whether a disproportionate percentage of minority drivers were being stopped relative to their presence on the roadway. This method was also used in Maryland (Lamberth, 1996), during the civil litigation case (*Wilkins v. Maryland State Police*) in which Robert Wilkins alleged that the rental car driven by his cousin on the Maryland State highway was stopped and searched by a drug-sniffing dog due to a “profile” prepared by the Maryland State Police which included Black males driving rental cars.

In the former case the courts held for the defendants. The latter case was settled, and the issue of racial profiling began to develop greater national attention and exposure. It is important to note that the early work performed in this field, while groundbreaking, was limited due to the fact that it was conducted within the context of litigation. That is, the issue was reviewed in a confrontative forum between community and law enforcement participants. The work was completed slowly, and dialogue surrounding the science was necessarily combative. A dramatic shift resulting from state legislation and agency participation and leadership relative to this

science began to take place in the late 1990's. State legislatures have mandated data collection, and/or developed laws prohibiting racial profiling by law enforcement agencies. At the time of this report, 24 states have enacted legislation relative to this issue. An additional 10 states have legislation pending on the issue, and agencies in all but 2 states in the nation have undertaken data collection efforts due to mandate, decree, or of their own volition. Several significant events have occurred nationally which have influenced this shift in focus, and which have helped direct activities in this field.

In June 1999, the Department of Justice (DOJ) hosted a conference on "Strengthening Police-Community Relationships." The conference recognized that police are more effective when they have the trust and cooperation of the residents in their community. However, in many communities, especially minority communities, a lack of trust remains between law enforcement and local residents. This tension is exacerbated by allegations of police misconduct such as racial profiling.

The conference highlighted the need to identify proactive police practices to build trust, enhance police integrity and reduce police misconduct. Members at the conference determined that collecting data on traffic and pedestrian stops, analyzing this data, and providing the results for public review can help to shift debates on racial profiling from anecdotal reports to informed discussions. By being proactive about recognizing and addressing racial profiling, police communities can go a long way towards managing perceptions around racial profiling and strengthening police-community relationships.

In February 2000, the DOJ held a conference entitled "Traffic Stops and Data Collection: Analyzing and using the Data." In this session, more than 75 federal, state and local police

administrators, prosecutors, civil rights advocates, government officials as well as police labor leaders, researchers, and community leaders gathered to examine the collection, analysis, and use of data on traffic, pedestrian and other law enforcement stops. Collectively the participants reached several conclusions:

- Traffic stop data collection systems are needed to respond to the perceptions of racial profiling, to measure the reality, and to bridge the gap between minorities and police.
- Core data elements of traffic stop systems should include: date and time, location, race and ethnicity, gender, reasons for initiating the stop, actions taken by the officer, and duration of the encounter.
- Benchmarks for comparing data collected on stops are essential for conducting valid analyses. Without valid control groups, supportable statistical analyses are not possible.
- Data that is complete, accurate and truthful is critical.
- Analysis of data must be conducted by a capable and credible party.
- Publicizing traffic stop data can help to build trust between public law enforcement agencies and the public.

In August of 2001, the Police Executive Research Forum under a DOJ grant held a conference for leading researchers in the field to discuss issues relating to benchmarking for stop data collection and analysis. The conference was attended by social scientists, legal scholars and practitioners from several police departments. This conference was the first of its kind to bring leading scientists and researchers together to discuss the best methods for analyzing stop data.

In March of 2003, the SOROS Foundation provided support for a conference on racial profiling that was co-hosted by the Institute on Race and Justice at Northeastern University, the American Civil Liberties Union, the National Organization of Black Law Enforcement Executives, and Lamberth Consulting. The Conference “Confronting Racial Profiling in the 21st Century: Implications for Racial Justice” featured 30 of the leading researchers in the country. The intent of the conference was to bring together researchers, law enforcement representatives and community representatives to collectively review the latest and most progressive methods for stop data collection and analysis. The conference also focused on post-stop activity, community engagement, and data auditing as primary subject topics.

From these conferences, a central and critical focus has become clear. To manage public perception about racial profiling and to strengthen community-policing relationships, the method used for collecting and analyzing stop data is critical. Two primary components must be in place to determine whether racial profiling is occurring: benchmarks and complete stop data.

The Right Benchmarks

“Benchmark data” refers to control data against which stop data can be compared to determine if any racial or ethnic group is being stopped at a disproportionate rate. The right benchmark can provide the racial and ethnic demographic for any given locality, whether it be an urban intersection or a state highway. Stop data can then be compared to the demographic, and a statistical analysis can be conducted which will help determine if some racial groups are being stopped more frequently than their demographic presence, which may indicate that profiling is occurring.

We believe that collecting the right benchmark, or understanding the true demographic of a locality, is essential to procuring valid results on profiling. If the assumed demographic is suspect, then the comparison to stop data may yield invalid results.

Today, the most experienced researchers in this field generally agree that the best method to measure roadway traffic is observational surveys, and many researchers have used observational surveys to validate other benchmark methods¹. This means that the racial and ethnic mix of individuals traveling through a locality must be identified and recorded. A schedule must be developed to survey carefully chosen locations according to a randomly selected time schedule. If the right locations are surveyed according to the right schedule, then the demographic for a given locality may be assumed.

Other benchmarks, such as census data on population demographics, have proven not to serve as reliable benchmarks. Census data measures static populations; that is, the geographic demographic of households. Highway and pedestrian traffic represent transient populations. People work in different locations from which they live, and travel in different routes and different ways to get there. Additionally, tourism, business trips, and other populations not measured in census data, such as university populations, make the comparison suspect. For example, in *New Jersey v. Soto* (1996) and *Wilkins v. Maryland State Police* (1996), it was found that census data did not accurately predict highway transient traffic. For these reasons, we used direct observations of transient populations in this study.

¹ Geoffrey P. Alpert, Michael R. Smith & Roger G. Dunham, "Toward a better benchmark: Assessing the utility of not-at-fault traffic crash data in racial profiling research." Paper presented at *Confronting Racial Profiling in the 21st Century: Implications for Racial Justice*. Boston, March, 2003. Amy Farrell, Jack McDevitt, Shea Cronin & Erica Pierce, "Developing a modified census benchmark for traffic stop data in Rhode Island." Jeff Rojek, Richard Rosenfeld and Scott Decker. "The influence of driver's race on traffic stops in Missouri." Paper presented at *Confronting Racial Profiling in the 21st Century: Implications for Racial Justice*. Boston, March, 2003.

Complete Stop Data

The second set of critical data is the police stop data. For the purposes of this report, we make a distinction between stop data, and ticket data. Stop data refer to all police stops (traffic or pedestrian) that do not result in the subject of the stop receiving a ticket. Ticket data refer to police stops that result in the subject of the stop receiving a ticket.

Ticket data may be compared to benchmark data to determine if racial profiling is occurring. However, the majority of police stops are not ticketed. For example, approximately 63% of all police stops in New Jersey (*New Jersey v. Soto*) were not ticketed, and approximately 75% of all stops in Arizona (*Arizona v. Folkes*) were not ticketed. Analyzing these data are important, perhaps more so than ticket data alone, and should be performed if at all possible.

The content of the stop and ticket data is equally important. In addition to race and ethnicity, the time of the stop and specific location are crucial so that valid comparisons against transient demographics can be conducted. On highways, this means that mile marker and traffic direction must be known to conduct valid comparisons. In urban areas, street name and nearest cross streets, or equally specific location data, must be known to conduct valid comparisons. Generalizations are not enough. Transient populations vary according to time of day and specific location. For example, the transient population in an urban area may differ significantly from one street corner to the next, depending upon the businesses, homes and university locations, and the time of day. We were fortunate in that the SAPD had been collecting stop data sufficient to meet the needs described above.

Data Analysis Considerations

We should note that the question of how to perform data analysis is not simple, nor have all researchers historically agreed on the best methods to conduct the analysis. This makes sense given the relative youth of this discipline, and the burgeoning nature of the issue. As mentioned previously, most researchers today agree that the best method for determining transient populations is observational surveys. We feel it is important, however, to discuss some points of current interest and review in the academic community relative to conducting this type of analysis.

Violators

One question facing those attempting to analyze traffic stop data involves the selection of the most appropriate benchmark to use for comparison. A number of measures have been used in the research to date and an open question remains as to whether using estimates of the population violating traffic laws is an improvement over estimates of drivers operating on a community's roadways. Courts (beginning with the *Soto* and *Wilkins* decisions) have said violators, but then quickly changed their focus when it became obvious that the two were virtually synonymous.

Court decisions uniformly support the notion that any motorist violating a traffic law is subject to being stopped by police and are the appropriate group to benchmark. However, to date, empirical evidence supports the contention that traffic and violators are synonymous, and in *Soto* the Court essentially used traffic and violators interchangeably.

The first scientific measurement of the appropriate comparison number for traffic stops determined both the proportion of Black motorists in the traffic stream, and those violating at least one traffic law (*New Jersey v. Soto, et al.*). The evidence in that case subsequently has determined that the two are virtually synonymous. First in *Soto* and in *Wilkins v. Maryland State Police* virtually every motorist was speeding (98.3% in *Soto* and 93.3% in *Wilkins*). More recently, Lamberth (2003)² reported a study in which police officers were given 5 minutes to determine whether randomly selected cars were violating some traffic law. The study concluded that fully 94% of the drivers were violating some law and it took a mean of 28 seconds for the officers to spot the violation.

For the reasons stated above, and due to constraints on resources, we have used the traffic estimates as our benchmarks in San Antonio. However, we should note that direct research measuring differences between racial or ethnic groups and driving behavior is very limited. While empirical evidence suggests that traffic violators and traffic motorists are virtually identical, a question remains as to whether one racial or ethnic group is more likely to violate egregiously than another. That is, it is theoretically possible, while perhaps not intuitive, that one racial or ethnic group is more likely to speed excessively, or drive vehicles with severe vehicle codes violations, or run traffic lights more often, etc. To date, empirical evidence is scant on these issues and mixed. We feel that one important area of future research in this field is a focused review of driving behavior among different racial and ethnic groups.

² Lamberth, John, "Measuring the racial/ethnic make up of traffic: The how, what and why." Paper presented at *Confronting Racial Profiling in the 21st Century: Implications for Racial Justice*. Boston, March, 2003.

Agency and Community Role

The early studies conducted in the context of litigation were necessarily limited in the amount of agency and community participation to conduct the work. In more recent work, researchers have had the benefits of working closely with agencies to conduct these studies. Indeed, agency support for providing perspective, stop data, deployment patterns, enforcement activities, crime statistics, policy and procedures, training, and other department information and activities targeted towards these issues have provided a plethora of valuable information for researchers studying this issue. We found the participation and contributions of the San Antonio Police Department invaluable in our efforts to conduct this study.

However, the communities and rank-and-file officers affected by this issue must also be considered when conducting these studies. Practically speaking, if the results of any analysis prove favorable to the agency, there may be some community representatives or civil rights groups that have concerns about the legitimacy of the work produced by a researcher who is paid by the agency. Conversely, results that reflect negatively upon an agency may be viewed with skepticism by agency officers who do not engage in biased police practices.

We feel strongly that the best method to reduce the risks of both of these groups is to involve them early, and throughout the process. The SAPD provided community representatives an opportunity to learn about the project and methodology at the outset of the program. We applaud the SAPD for their foresight in recognizing and working with the community. We strongly recommend that future research efforts, in the City of San Antonio or elsewhere, include both of these stakeholder groups in efforts to conduct studies of this kind.

San Antonio Police Department Initiative

Senate Bill 1074 became effective on September 1, 2001 which prohibits racial profiling by peace officers in the state of Texas. All law enforcement agencies in the state were required to participate. The act required the agencies to develop a policy prohibiting racial profiling and to begin collecting stop data in two “tiers” implemented on January 1, 2002 (Tier 1) and January 1, 2003 (Tier 2.) Tier 1 data refers to the collection of information in which a citation is issued subsequent to a traffic stop. The Tier 1 data includes race, ethnicity, whether a search was conducted, and whether an individual consented to the search. Tier 2 data refers to the collection of information subsequent to a traffic or pedestrian stop. Tier 2 data includes gender, race and ethnicity, reason for the stop, whether a search was conducted, whether the individual detained consented to a search, whether contraband was found, whether probable cause to search existed, whether an arrest was made, street address of the stop and whether a warning or citation was issued after the stop.

In the spring of 2001, the SAPD convened a working group from representatives from various community groups, the district attorney’s office, community activists, patrol and traffic officers, research and planning staff, and the Police Psychological Service Unit to construct a policy as mandated in SB 1074 and to develop processes for the department to begin collecting stop data. The working group determined that it would best serve the agency, the community and officers to begin collecting Tier 1 and Tier 2 data beginning January 1, 2002. In addition to the data collection requirements mandated in SB 1074, the working group opted to have officers collect information which included:

- Duration of the stop. This information has shown in other studies of this kind to be helpful in determining whether disparities exist in the duration of stops and searches of minority groups.
- Race and Ethnicity as categorized by the officer's perception. While the bill calls for race or ethnicity as provided by the individual, or based upon the officer's perception, we feel strongly that using a consistent method (i.e., officer's perception) provides a more coherent database and a dataset that is more aligned with the allegations upon which racial profiling are based.

We feel strongly that the course elected by the SAPD was beneficial in terms of including affected stakeholders, but also in its ability to conduct meaningful analysis of the data collected. By electing to collect Tier 2 stop data in 2002, the agency enabled this study to take place in 2003. That is, by collecting data on stops that did not result in a citation, the agency has provided a much more comprehensive database to use for analysis. The methodology that the SAPD developed for data collection should also be noted. Prior to the data collection phase in 2002, officers had to document traffic stops that resulted in either a citation or written warning, as well as pedestrian stops that resulted in a field interview. These forms were simply modified to add the specific racial/ethnic data and other required data on searches, etc. This methodology allowed for the data to be collected conveniently.

In many jurisdictions when racial profiling data collection starts, there is a decrease in the number of stops made. In extreme cases there have been large decreases in the number of stops and citations reported. This apparently did not happen in San Antonio. There was about a 7.6% increase in citations from 2001 (148,917) to 2002 (160,243). The increase in warning tickets

was much greater, rising from 20,711 in 2001 to 27,881, a 34.6% increase. These increases are truly impressive, given the decreases in other jurisdictions.

METHODOLOGY: OVERVIEW

The methodology used in this study has been developed and refined based upon experience with similar efforts in determining if racial profiling is occurring in the states of New Jersey, Maryland, Arizona, Kansas, California, and Michigan (*State of New Jersey v. Soto*,³ *Wilkins v. Maryland State Police*,⁴ *Arizona v. Folkes*⁵, Lamberth, 2001, 2003), and through our experience in working with national leaders on this issue in US DOJ conferences and work sessions. Our belief is that the most effective approach is a holistic one and includes the assessment of racial profiling, intervention to train employees and to improve processes and behaviors if the problem exists, and communications with the stakeholder communities and groups that are affected by the practice.

It is not possible to conduct benchmarking in every part of a city or highway to assess racial profiling. The logic of our work, elemental to statistical analysis in other contexts, is to sample certain portions of city drivers on randomly selected days and times of day. This method enables the generalization of the study results to the police department's activity in the areas that we study. The determination of locations to assess in a city is necessarily determined by traffic patterns and police activity in that city. Days and times of day are selected randomly to assure the greatest generalization possible. In this study, we assessed in great detail specific locations within the City of San Antonio.

³ *State v. Pedro Soto*, A. 734A. 2d 350(N.J. Super: Ct. Law Div. 1996)

⁴ *Wilkins v. Maryland State Police, et al.*, Civ. No MJG-93-468

⁵ *State v. Barrington Folkes, et al.*

As previously described, the appropriate standard of comparison, or benchmark, must be established. Existing stop data then must be compared against that benchmark to assess the occurrence of racial profiling. That is, the percentage of minorities stopped by police departments must be compared to the benchmark data to assess whether minorities are stopped at a disproportionate rate to that at which they travel the roadways. Furthermore, most experts agree that the appropriate benchmark is not city or surrounding area population that can be obtained in census data. The appropriate benchmark is the motoring, or transient, population.

The racial composition of this transient population may or may not mirror the population of the city or county. For example, as shown in Table 1, the Black driving population (men and women aged 16 years or older) residing within the I-10 & Fresno location is 1.1 percent⁶. If we used this percentage as the benchmark to which to compare the stops made by the SAPD in that area, we would significantly underestimate the percentage of Blacks in the driving population (3.9 percent). However, as Table 1 shows, had we used census data to estimate the Hispanic transient population at I-410 & Harry Wurzbach we would have substantially overestimated the Hispanics in the driving population.

Table 1 provides the percentage of Blacks and Hispanics in the driving population at each of the locations benchmarked in the City of San Antonio.

⁶ These data were compiled by identifying the census tracts (i.e., geographic units that average 4,000 residents) contained within the perimeters of each benchmark location. Then, demographics were obtained from the U.S. Census Bureau. In cases where more than one census tract fell within these perimeters, weighted averages were calculated.

Table 1 - San Antonio Police Department: Black and Hispanic Benchmark vs. Census Tract ⁷

Area No ⁸	Location	Percent					
		Bench. Black Traffic	Black Census	Comp. Disparity	Bench. Hispanic Traffic	Hispanic Census	Comp. Disparity
1	I-10 & Fresno	3.9%	1.1%	-254.5%	67.7%	86.7%	21.9%
2	S.W. Military & Tacoma; S.W. Military & Pleasanton	3.3%	0.7%	-371.4%	88.4%	86.9%	-1.7%
3	S.W. Military & Zarzamora	2.4%	0.9%	-166.7%	73.9%	91.4%	19.1%
4	Guadalupe & S. Zarzamora	2.2%	0.8%	-175.0%	89.3%	96.9%	7.8%
5	Wheatley Courts	65.1%	61.3%	-6.2%	33.0%	35.1%	6.0%
6	Lombrano & Hamilton	12.5%	10.2%	-22.5%	80.9%	87.4%	7.4%
7	Commerce & Presa	7.9%	9.5%	16.8%	70.7%	56.7%	-24.7%
9	I-410 & Marbach	8.9%	9.5%	6.3%	52.9%	59.3%	10.8%
10	San Pedro & Cypress	5.8%	2.9%	-100.0%	61.2%	77.5%	21.0%
11	Loehman's Village	5.8%	5.4%	-7.4%	53.9%	45.3%	-19.0%
12	I-10 & Hildebrand	3.9%	1.3%	-200.0%	67.7%	82.7%	18.1%
13	I-35 & US 90	4.0%	0.8%	-400.0%	68.8%	93.1%	26.1%
14	I-410 & Perrin Beitel	12.8%	9.8%	-30.6%	30.4%	29.1%	-4.5%
15	I-10 & Woodlawn	3.8%	1.6%	-137.5%	67.4%	81.8%	17.6%
16	I-410 N.E. & Broadway	9.5%	5.0%	-90.0%	33.6%	38.0%	11.6%
17	I-10 & Wurzbach	3.9%	7.0%	44.3%	34.2%	43.0%	20.5%
18	Market & Bowie	8.0%	9.5%	15.8%	69.4%	56.7%	-22.4%
20	US 281 & I-35	4.9%	7.3%	32.9%	38.4%	71.4%	46.2%
21	US 281 & N. St. Mary's	5.4%	2.4%	-125.0%	38.8%	53.1%	26.9%
22	I-410 N.W. & Ingram	5.4%	6.8%	20.6%	55.6%	59.6%	6.7%
23	US 281 & Hildebrand	5.8%	3.1%	-87.1%	38.7%	9.1%	-325.3%
24	I-410 & Medical	4.0%	5.4%	25.9%	31.6%	38.5%	17.9%
25	I-410 & Starcrest	9.3%	12.5%	25.6%	32.4%	22.4%	-44.6%
26	Pin Oak & Oaklawn	10.3%	9.9%	-4.0%	60.9%	56.3%	-8.2%
27	I-10 & Vance Jackson	4.3%	1.4%	-207.1%	66.6%	70.3%	5.3%
28	Broadway & Mulberry	7.4%	2.7%	-174.1%	37.2%	31.1%	-31.0%
29	US 281 & Basse	5.6%	0.8%	-600.0%	38.0%	30.7%	-23.8%
30	I-35 & Walzem	13.3%	16.7%	20.4%	31.2%	32.6%	4.3%
31	Commerce & Main Plaza	6.3%	9.5%	33.7%	76.4%	56.7%	-34.7%
32	W. Commerce & Gen. McMullen	1.8%	0.6%	-200.0%	87.2%	95.9%	9.1%
33	I-410 N.E. & US 281	9.1%	4.6%	-97.8%	31.9%	43.2%	26.2%
34	I-410 & Culebra	6.6%	9.9%	33.3%	48.8%	59.1%	17.4%
35	North Star Mall	4.5%	3.4%	-32.4%	30.3%	52.2%	42.0%
36	I-410 & Harry Wurzbach	9.3%	26.1%	64.4%	33.7%	76.1%	55.7%
37	I-10 & West	4.1%	1.2%	-241.7%	67.1%	78.2%	14.2%

⁷ Note: The comparative disparity is arrived at by subtracting the traffic percentage from the census percentage and dividing by the census percentage.

⁸ Note that locations 8 and 40 were removed, and location 19 was combined with location 2, and location 41 was combined with location 4.

Area No ⁸ .	Location	Percent					
		Bench. Black Traffic	Black Census	Comp. Disparity	Bench. Hispanic Traffic	Hispanic Census	Comp. Disparity
38	I-10 & DeZavala	4.1%	5.1%	19.6%	28.8%	35.5%	18.9%
39	I-10 & Fredericksburg	2.7%	7.0%	61.4%	29.4%	53.6%	45.1%
42	W. Military & US 90	10.1%	5.6%	-80.4%	52.8%	68.9%	23.4%
43	I-37 & New Braunfels	6.9%	1.6%	-331.3%	62.5%	75.9%	17.7%

Clearly, using census data for the City of San Antonio would have overestimated Black and Hispanic traffic at some locations and underestimated it at others. The discrepancy between the transient population and census data, and among different geographic locations, is fundamental to understanding racial profiling and assessing whether or not it is occurring. It is this precision of measurement—accurately identifying the “transient” population at specific locations—that the methodology used in this study allows.

Having determined the percentages of minorities in the driving population as the benchmarks, these data are then compared to the percentages of minorities stopped by SAPD officers. The datasets that were utilized to determine the proportions of minority stops were provided to us by the SAPD.

Approach

The approach in the City of San Antonio consisted of four work components that were intended to satisfy three primary objectives developed by the agency: 1) conduct an analysis to determine if racial profiling was occurring during traffic stops and pedestrian stops, 2) include community representatives during the project and obtain feedback, 3) examine post-stop activity to determine if targeted groups were treated disparately. These four work components are described in detail below.

Component 1: Benchmark Design

The goal of benchmark design was to determine the benchmark survey locations within the City of San Antonio's jurisdiction. These locations served as the focal points used to determine the benchmark transient populations. In order to select survey locations for benchmarking, the assistance of law enforcement agency personnel was required since the survey locations must be targeted rather than chosen randomly. Those sites selected had relatively high transient populations (traffic across these sites was high), were patrolled frequently, and were locations where police made frequent stops. Targeting the right benchmark locations is critical to ensuring that the survey effectively represented the transient traffic. The benchmark locations yielded the control data against which stop data were compared. In order to yield meaningful results, the locations of the benchmark data had to be identical to the locations of the stop data.

The research team met with representatives of the SAPD from April 27 to April 30, 2003 and again from June 15 to June 18, 2003. During the meetings benchmark locations were reviewed based upon the motor vehicle stop data provided by the SAPD from January 1 through December 31, 2002. Forty-three benchmark locations were tentatively selected and each received a daytime and a nighttime, on-site inspection. Information relating to the location was discussed, including criteria such as:

- Traffic patterns (e.g., nearby entertainment or commercial establishments that might influence or impact traffic driving patterns),
- Traffic density (the number of cars traveling in each direction within a specified timeframe),

- Sight lines for surveyors (surveyor positioning, distance to traffic, and any obstacles that might impede sight),
- Lighting or lack thereof (required for night surveying and provided by the SAPD),
- Surveyor safety (in high-crime areas and particularly at night, security was provided for the surveyors),
- Police activity, and
- Type of vehicles stopped by police.

During the selection process, work began on determining the perimeter around each location in which stops would be included for comparison to the benchmark data for that location⁹. The survey times for these locations were chosen randomly to ensure representative transient populations during all times of day. This ensures that no bias is inadvertently present when determining transient populations, and accounts for all possible stop times (day and night). A 24-hour table was used to select random surveying time periods. Surveying time periods at benchmark locations lasted anywhere from 18 to 60 minutes per session. The locations finally selected for benchmarking are presented in Table 2 below.

Table 2 - San Antonio Benchmark Locations

No.	Location	No.	Location
1	I-10 & Fresno	23	US 281& Hildebrand
2	S.W. Military & Tacoma; S.W. Military & Pleasanton	24	I-10 & Medical
3	S.W. Military & Zarzamora	25	I-410 & Starcrest
4	Guadalupe & S. Zarzamora	26	Pin Oak & Oaklawn
5	Wheatley Courts	27	I-10 & Vance Jackson
6	Lombrano & Hamilton	28	Broadway & Mulberry

⁹ Maps used to draw perimeters can be found in Appendix B.

No.	Location	No.	Location
7	Commerce & Presa	29	US 281 & Basse
9	I-410 & Marbach	30	I-35 & Walzem
10	San Pedro & Cypress	31	Commerce & Main Plaza
11	Loehman's Village	32	W. Commerce & Gen. McMullen
12	I-10 & Hildebrand	33	I-410 N.E. & US 281
13	I-35 & US 90	34	I-410 & Culebra
14	I-410 & Perrin Beitel	35	North Star Mall
15	I-10 & Woodlawn	36	I-410 & Harry Wurzbach
16	I-410 & Broadway	37	I-10 & West
17	I-10 & Wurzbach	38	I-10 & DeZavala
18	Market & Bowie	39	I-10 & Fredericksburg
20	US 281 & I-35	42	W. Military & US 90
21	US 281 & N. St. Mary's	43	I-37 & New Braunfels
22	I-410 & Ingram		

Location 8, West of Downtown and I-35, and Location 40, I-35 North of Southcross are not included because of problems either in determining a location to conduct the benchmarking (West of Downtown) or a very small number of I-35 stops (North of Southcross). Two other locations were combined with an adjacent location for benchmarking. Locations 19 (S.W. Military east of Boswell) was combined with location 2. Location 41 (Guadalupe from San Jacinto to San Marcos) was combined with location 4. Thus there are 39 locations listed with locations 8, 19, 40 and 41 omitted.

Component 2: Benchmark Data Collection

The goal of the benchmark data collection step was to capture the characteristics of the transient populations for the locations at which the surveys were to be conducted. Benchmarking surveys took place from June 22, 2003 to August 8, 2003. Surveyors coded a total of 44,507 drivers within the SAPD benchmark locations. Of these drivers, 42,268 (95.0 %) were race/ethnicity identified. Fourteen hundred and ten motorists (3.2%) could not be identified because of heavily tinted windows. Other reasons precluded the racial/ethnic identification of

829 (1.9%) motorists. This is an extremely high rate of racial identification, in part due to the excellent ambient light present and additional lighting provided by the SAPD.

At four of the locations, Wheatley Courts, Loehman's Village, Commerce & Main Plaza and North Star Mall, benchmarking was done primarily of pedestrians. In 2 of these locations, motorists were also enumerated, as the benchmarking was done in parking lots and those individuals in their cars at the times the surveyors moved through the area were also counted. The racial/ethnic counts of pedestrians and those in their vehicles at these two benchmark areas are presented together. At these locations, 7044 pedestrians were surveyed. A total of 51,551 motorists/pedestrians were observed. Of these, 49,226 (95.5%) were race/ethnicity identified.

Surveyor Training

Teams of surveyors were hired and trained to visually identify and manually record the race and ethnicity of individuals who comprise the transient populations. Training sessions and dry run-throughs were held from June 17 through June 20 at the SAPD and at on-site locations. Survey training is critical to ensure that surveyors understand the surveying process, surveyor positioning, daytime and nighttime surveying guidelines, data recording procedures, quality assurance reviews such as the assessment of inter-rater reliability, and the data cataloguing steps required for this work. During this session, survey team leaders also were trained on survey management tasks such as status reporting, interacting with police department personnel, and supervising surveyors. The survey training consisted of:

1. A high-level overview of the purpose of the San Antonio study. The intent of this portion of the training was to provide surveyors with a basic understanding of the importance of the study and the critical role that they would play in the study.

2. An explanation of the survey method, schedule, and roles were discussed, and the survey procedures were diagrammed and reviewed. The intent of this portion of the training was to provide surveyors with a basic understanding of how the survey would be conducted.
3. Hands-on practice in the field in which surveyors practiced on-location, using the actual data sheets developed for the survey. During this portion of the training, guidance was provided on data capture, review, and feedback to surveyors on the methods and tips for positioning, and data recording. Surveyor data sheets were reviewed, and feedback was provided on performance. The intent of this portion of the training was to provide surveyors a chance to practice in a “consequence-free” environment before conducting the actual survey. Inter-rater reliability coefficients were computed to ensure that surveyors were trained to criterion¹⁰.
4. Dry run-throughs were conducted with team leads and with surveyors. The run-throughs served to assist surveyors in determining driving routes, driving timing, break timing, and survey protocol. The intent of the run-throughs were to ensure that surveyors would hit the ground running during surveying.

Observation Survey Types

Two types of surveys were conducted, stationary and rolling, and different methods were used to capture different transient populations. Drivers’ race or ethnicity was categorized as Asian, Black, Hispanic, Middle Eastern, Native American, White, Other, or Unknown. For

¹⁰ A minimum inter-rater reliability coefficient (i.e., the percent of agreement between two surveyors observing the same car at the same time) of .80 was used as this criterion. This is a commonly accepted standard in social science research.

stationary surveys, surveyors stood at street corners to record the race or ethnicity of individuals. The surveyors recorded populations at predetermined times and predetermined locations.

Stationary surveys were conducted at all intersections surveyed in San Antonio. Each survey team was comprised of two individuals, one team leader and one surveyor. The team leader was responsible for supervising the team, keeping track of survey times, interacting with police liaisons, and organizing and collecting the data sheets. The team leader also acted as a surveyor. Each surveyor was responsible for capturing data for traffic moving in one direction (North, South, East, or West). Surveyors captured data for one lane at a time and alternated lanes.

For rolling surveys, surveyors traveled in cars to record the race or ethnicity of individuals traveling on the highways. Two surveyors were positioned in a moving car that drove in the right lane. The car would then exit the highway and proceed in the opposite direction. This process would be repeated for the duration of the time allotted for the surveying. Surveyors would have responsibility for one lane and would record drivers' race or ethnicity and age.

Surveys of pedestrians were undertaken at four locations where there were substantial numbers of stops of pedestrians. Surveyors slowly moved through or by the target location in a car and enumerated the race/ethnicity of all pedestrians who were visible. In two parking areas, motorists who were in the parking lots of shopping areas were also counted, as they had just arrived or were just leaving the shopping area. As with the stationary surveys, these surveys took place at randomly selected days and times.

Quality Assurance

Each team consisted of one team leader and one core surveyor. The researchers and survey team leaders conducted benchmarking quality assurance activities throughout the duration of the surveys. Quality assurance was conducted to ensure that surveying was conducted properly and on schedule, and to measure inter-rater reliability. Quality assurance activities consisted of:

- Conducting inter-reliability tests to measure the extent to which surveyors uniformly perceived race and ethnicity. These tests were conducted by several survey teams at several locations.
- Contacting police liaisons from each agency to provide them with the survey schedule and to answer any questions they might have about the benchmarking activities.
- Conducting pre-survey reviews for each location to determine positioning, scheduling, necessary materials, needs for additional lighting, and contingency planning.
- Conducting ongoing status meetings to review survey progress, discuss issues, and review surveyor performance.
- Conducting post-survey reviews to ensure timing and survey scheduling and to review data cataloguing and data entry schedules.
- Conducting periodic reviews of captured data to ensure that the data sheets were properly catalogued and filed.
- Conducting data entry reviews to ensure that data entered matched the data recorded.

After completion of the benchmark surveys, the data were entered into SPSS software for comparison against stop data. The outcomes of this step were the identification of transient traffic data that served as the benchmarks against which stop data were compared.

Inter-Rater Reliability

One of the scientific standards for assuring that different raters are making the same determinations with regard to race and ethnicity is a technique called inter-rater reliability (Trochim, 2002). The assessment of inter-rater reliability involves two surveyors coding the race or ethnicity of drivers of the exact same cars. Several inter-rater reliability tests were run. While there is little doubt that there is a high reliability in determining race with regard to Blacks and Caucasians, there has been little empirical evidence that it is possible to make the same determinations accurately in the case of Hispanics. Therefore, we purposely ran inter-rater reliability tests where there were higher concentrations of Hispanics.

The stop data set consisted of 58,468 motor vehicle and pedestrian stops coded for date, time of stop and motorist/pedestrian demographics that occurred at the benchmarked locations. There were twelve inter-rater reliability tests conducted at four different times during the surveying. The inter-rater reliability for all twelve tests was .81, which, while well within scientific standards for these ratings was also lower than has been observed where there are not so many Hispanic motorists. Generally speaking, inter-rater reliabilities when the minority being observed is Black run about .9 or slightly higher. Consistent with our experience in other locations, when there are a large number of Hispanics in the transient population the reliabilities are somewhat lower, in the range of .8 to .84, as was the case here. This is because it is generally accepted that it is easier to identify Black motorists visually than it is for Hispanic motorists.

Component 3: Data Analysis

The goal of the data analysis step was to analyze the benchmark data against the stop data to determine if racial profiling was occurring. The analysis compared the proportion of stops for specified minority groups against the transient populations in the surveyed areas. When the proportion of stops for specified minority groups is higher than their representative transient population, one may conclude that racial profiling is occurring.

Stop data were collected by the SAPD during the 2002 calendar year. There were 288,490 recorded stops. Of these, less than 100 did not record race/ethnicity. Furthermore, there were a small percentage of stops that could not be mapped for exact location. These 9,061 stops (3.14%) are a very small proportion of the stops and are well within acceptable limits of unknown stops.

Our analysis was conducted separately for Blacks and Hispanics. We computed odds-ratio analyses (Hosmer and Lemeshow, 1989) for these minority populations. These estimates take the form of “If you are Black (Hispanic) you are ___ times as likely to be stopped as if you are not Black (Hispanic).” Generally, when the odds ratio is greater than 1.5, we conclude that there may be racial profiling occurring. Also, we computed a chi-square analysis (Kanji, 1993) on the number of minority group members in transient populations compared to the numbers stopped. This analysis answers the question “Are these real differences, or could these observed differences be a result of chance factors?” The outcomes of this step were the statistical analyses run for each minority group at each benchmark location as well as odds ratios for each minority group that will indicate whether racial profiling is occurring.

Component 4: Reporting

The goal of this step is provide concerned stakeholders with information relative to the study method and progress in a timely fashion. In April and June, 2003 the project team met with agency representatives and community representatives to discuss the study methodology and to answer questions relative to the project and the issue. These meetings were conducted to accomplish the following:

- Provide interested stakeholders the opportunity to learn the methodology and ask questions about how and why the study was conducted,
- Bring law enforcement, the study researchers, and communities members together in one forum to discuss the issue and the approach towards addressing it,
- Develop a common context in which to view the study to facilitate discussion after study results are developed, and
- Provide community members the opportunity for authentic participation in the study.

On Monday, June 16, Dr. John Lamberth provided a presentation to community members designed to present the methodology used to address the issue. Agency representatives and members from the project team were present to answer questions.

Throughout the project, monthly management meetings were conducted which included representatives from SAPD and Lamberth Consulting. These meetings were conducted to review project progress against plan, discuss completed tasks, and review upcoming tasks and issues associated with the project.

RESULTS

Race

The race/ethnicity of virtually all the stops by the SAPD were recorded based on the perception of the officer. That is, motorists were not asked their race/ethnicity by the officer. Congruently, the race/ethnicity of those benchmarked were the perceptions of the surveyors. This means that officer perceptions were compared to surveyor perceptions, which is a perception to perception comparison.

The racial comparisons at the 39 benchmark locations analyzed are presented in Table 3.

Table 3 - Race Analysis

Location	Bench N ¹¹	Bench Black %	Stop N	Stop Black %	Diff %	Odds Ratio
1. I-10 & Fresno	1215	3.9	1986	4.2	0.3	1.1
2. S.W. Military & Tacoma; S.W. Military & Pleasanton	3510	3.3	5129	4.1	0.8	1.3
3. S.W. Military & Zarzamora	2442	2.4	4685	3.1	0.7	1.3
4. Guadalupe & S. Zarzamora	2880	2.2	4716	1.8	-0.5	0.8
5. Wheatley Courts	929	65.1	1188	61.9	-3.2	0.9
6. Lombrano & Hamilton	591	12.5	1883	31.8	19.3	3.3
7. Commerce & Presa	1636	7.9	2968	9.3	1.4	1.2
9. I-410 & Marbach	1749	8.9	2304	9.1	0.2	1.0
10. San Pedro & Cypress	1185	5.8	2307	8.8	3.0	1.6
11. Loehman's Village	3531	5.8	434	6.2	0.4	1.1
12. I-10 & Hildebrand	1215	3.9	2004	6.8	2.9	1.8
13. I-35 & US 90	276	4.0	1912	4.8	0.8	1.2 ¹²
14. I-410 & Perrin Beitel	1567	12.8	1714	21.1	8.3	1.8
15. I-10 & Woodlawn	1215	3.8	1652	7.1	3.3	1.9
16. I-410 & Broadway	929	9.5	422	13.5	4.0	1.5 ¹³

¹¹ The grand total number of motorists/pedestrians listed in this column is larger than the total number of motorists/pedestrians given in the text of the report because some benchmarks (particularly) the rolling ones were weighted averages of the number enumerated in the entire rolling survey, and the entire N for the survey is listed.

¹² This odds ratio is based on the proportion of minority motorists in the rolling portion of the survey of U.S. 90 at I-35.

¹³ The proportion of minority stops on and off the Interstate was sufficiently different to omit non-highway stops where only the highway was benchmarked.

Location	Bench N ¹¹	Bench Black %	Stop N	Stop Black %	Diff %	Odds Ratio
17. I-10 & Wurzbach	2153	3.9	1579	8.6	4.7	2.3
18. Market & Bowie	1610	8.0	1646	10.4	2.4	1.3
20. US 281 & I-35	1418	4.9	941	7.9	3.0	1.7 ¹³
21. US 281 & N. St. Mary's	1418	5.4	673	5.5	0.1	1.2 ¹³
22. I-410 & Ingram	2800	5.4	1266	8.2	2.8	1.6
23. US 281 & Hildebrand	1418	5.8	1263	5.6	-0.2	1.0
24. I-10 & Medical	593	4.0	711	7.6	3.6	1.9 ¹³
25. I-410 & Starcrest	929	9.3	919	16.1	6.8	1.9 ¹³
26. Pin Oak & Oaklawn	673	10.3	783	18.9	8.6	2.0
27. I-10 & Vance Jackson	1215	4.3	973	5.5	1.2	1.3
28. Broadway & Mulberry	2149	7.4	463	18.1	10.7	2.8 ¹⁴
29. US 281 & Basse	1418	5.6	724	5.8	0.2	1.0
30. I-35 & Walzem	1808	13.3	908	22.3	9.0	1.9
31. Commerce & Main Plaza	1583	6.3	861	9.1	2.8	1.5
32. W. Comm. & Gen. McMullen	2888	1.8	833	2.4	0.6	1.3
33. I-410 N.E. & US 281	197	9.1	826	9.4	0.3	1.0
34. I-410 & Culebra	2188	6.6	780	10.9	4.3	1.7
35. North Star Mall	2799	4.5	670	7.0	2.5	1.6
36. I-410 & Harry Wurzbach	129	9.3	665	14.1	4.8	1.6
37. I-10 & West Ave.	1215	4.1	656	6.1	2.0	1.5
38. I-10 & DeZavala	2475	4.1	628	6.8	2.7	1.7
39. I-10 & Fredericksburg	593	2.7	632	6.8	4.1	2.6
42. W. Military & US 90	1875	10.1	458	5.9	-4.2	0.6
43. I-37 & New Braunfels	1514	6.9	330	6.7	-0.2	1.0

The first column in Table 3 refers to the location of the stops. The second column refers to the number of motorists (N) recorded at the benchmark location. The next column refers to the percentage of Black motorists in the benchmark data. The next column refers to the number (N) of stops recorded in the stop data. The next refers to the percentage of Black stops. The next refers to the percent difference, and the final column refers to the odds ratio of being stopped if you are Black.

¹⁴ The proportion of minority traffic and non-traffic stops was sufficiently different to omit non-traffic stops.

The odds ratio is best understood by filling in the ratio in the following sentence: “If you are Black, you are _____ times as likely to be stopped than if you are not Black.” If no racial profiling were occurring, all of the ratios would be 1.0. This would mean that Blacks are no more likely to be stopped than non-minorities.

Odds ratios between 1.0 and 1.5 generally are seen as benign. Ratios between 1.5 and 2.0 provide an indication that a review of stops in these locations should be conducted. Ratios above 2.0 point to the potential targeting of minority motorists, and further action may be required from the agency. The community demographics and inter-rater reliability must be considered, however, when discussing these guidelines.

As Table 3 shows, of the 39 odds ratios, 3 are less than 1, 5 are exactly 1, 13 are between 1 and 1.5, 14 are between 1.5 and 2.0 and 4 are above 2. The highest is 3.3 at Lombrano and Hamilton, followed by 2.8 at Broadway and Mulberry and 2.6 at I-10 and Fredericksburg. Over half of the odds ratios are in the benign area and 18 are above it. If these data are collapsed and an odds ratio is computed (considering that 4,831 [8.9%] Black motorists were stopped and, based upon the benchmark data, one would expect that 3,662 [6.8%] Black motorists would be stopped), the overall odds ratio is 1.3, clearly falling in the benign area overall and indicating that there is no profiling in the stops of Black motorists going on overall in the 41 areas selected for study.

There do appear to be a few areas, as noted above, where there are a high proportion of stops of Black motorists. First, we would note that while there are 4 areas with an odds ratio above 2, there are 3 that are below the expected ratio of 1. This means that it is possible that some of these five high areas were high in 2002 but will not be in future years, because of

changing circumstances. As examples we cite the two highest odds ratios. The fact that there is a recreational center at Lombrano and Hamilton that was working on reduced summer hours during the benchmarking process probably affected that location. Though we cannot quantify what the results would have been had the benchmarking been done when the recreational center was on regular hours, it may well have been a factor in the high odds ratio at Lombrano and Hamilton. While we were reviewing benchmark areas, a convenience store at Broadway and Mulberry was no longer in operation. As this was the focus of much of the activity in that area in 2002, things might change in 2003. We recommend that these six areas be reviewed again in 2003. During this review the SAPD, should look at both overall officer ratios of stops of Black motorists and at individual officers to determine whether the higher ratios in these areas are the result of the actions of a few officers or are more systemic.

Ethnicity

The data on stops of Hispanics and the benchmarking of the 39 locations is contained in Table 4.

Table 4 - Ethnicity Analysis

Location	Bench N ¹⁵	Bench Hispanic %	Stop N	Stop Hispanic %	Diff %	Odds Ratio
1. I-10 & Fresno	1215	67.7	1986	71.7	4.0	1.2
2. S.W. Military & Tacoma; S.W. Military & Pleasanton	3510	88.4	5129	84.8	-3.6	0.7
3. S.W. Military & Zarzamora	2442	73.9	4685	81.0	7.1	1.5
4. Guadalupe & S. Zarzamora	2880	89.3	4716	89.4	0.2	1.0
5. Wheatley Courts	929	33.0	1188	29.0	-4.0	.8
6. Lombrano & Hamilton	591	80.9	1883	56.5	-24.4	0.3

¹⁵ The grand total number of motorists/pedestrians listed in this column is larger than the total number of motorists/pedestrians given in the text of the report because some benchmarks (particularly) the rolling ones were weighted averages of the number enumerated in the entire rolling survey, and the entire N for the survey is listed.

Location	Bench N ¹⁵	Bench Hispanic %	Stop N	Stop Hispanic %	Diff %	Odds Ratio
7. Commerce & Presa	1636	70.7	2968	64.1	-6.6	0.7
9. I-410 & Marbach	1749	52.9	2304	64.1	11.3	1.6
10. San Pedro & Cypress	1185	61.2	2307	64.9	3.7	1.2
11. Loehman's Village	2531	53.9	434	64.3	10.4	1.6
12. I-10 & Hildebrand	1215	67.7	2004	65.4	-2.3	0.9
13. I-35 & US 90	276	68.8	1912	78.7	9.9	1.7 ¹⁶
14. I-410 & Perrin Beitel	1567	30.4	1714	36.2	5.8	1.3
15. I-10 & Woodlawn	1215	67.4	1652	60.6	-6.8	0.7
16. I-410 & Broadway	929	33.6	422	40.5	6.9	1.3 ¹⁶
17. I-10 & Wurzbach	2153	34.2	1579	45.1	10.9	1.6
18. Market & Bowie	1610	69.4	1646	68.2	-1.2	0.9
20. US 281 & I-35	1418	38.4	941	56.1	17.7	2.1 ¹⁶
21. US 281 & N. St. Mary's	1418	38.8	673	54.1	15.3	1.9 ¹⁶
22. I-410 & Ingram	2800	55.6	1266	61.4	5.8	1.3
23. US 281 & Hildebrand	1418	38.7	1263	54.6	15.9	1.9
24. I-10 & Medical	593	31.6	711	44.3	13.2	1.7 ¹⁶
25. I-410 & Starcrest	929	32.4	919	33.9	1.5	1.1 ¹⁶
26. Pin Oak & Oaklawn	673	60.9	783	55.2	-5.7	0.8
27. I-10 & Vance Jackson	1215	66.6	973	62.7	-3.9	0.8
28. Broadway & Mulberry	2149	37.2	463	47.3	10.1	1.5 ¹⁷
29. US 281 & Basse	1418	38.0	724	47.2	9.2	1.5
30. I-35 & Walzem	1808	31.2	908	34.0	2.8	1.1
31. Commerce & Main Plaza	1583	76.4	861	72.1	-4.3	0.8
32. W. Comm. & Gen. McMullen	2888	87.2	833	93.5	6.3	2.1
33. I-410 N.E. & US 281	929	31.9	826	45.8	13.9	1.8
34. I-410 & Culebra	2188	48.8	780	59.4	10.6	1.5
35. North Star Mall	2799	30.3	670	57.8	27.5	3.1
36. I-410 & Harry Wurzbach	929	33.7	665	38.9	5.2	1.3
37. I-10 & West Ave.	1215	67.1	656	64.9	-2.2	0.9
38. I-10 & DeZavala	2475	28.8	628	40.5	11.7	1.7
39. I-10 & Fredericksburg	593	29.4	632	43.4	14	1.9
42. W. Military & US 90	1875	52.8	458	72.7	19.9	2.4
43. I-37 & New Braunfels	1514	62.5	330	59.4	-3.1	0.9

The first column in Table 4 refers to the location of the stops. The second column refers to the number of motorists (N) recorded at the benchmark location. The next column refers to the

¹⁶ The proportion of minority stops on and off the Interstate was sufficiently different to omit non-highway stops where only the highway was benchmarked.

¹⁷ The proportion of minority traffic and non-traffic stops was sufficiently different to omit non-traffic stops.

percentage of Hispanic motorists in the benchmark data. The next column refers to the number (N) of stops recorded in the stop data. The next refers to the percentage of Hispanic stops. The next refers to the percent difference, and the final column refers to the odds ratio of being stopped if you are Hispanic.

The odds ratio is best understood by filling in the ratio in the following sentence: “If you are Hispanic, you are _____ times as likely to be stopped than if you are not Hispanic.” If no racial profiling were occurring, all of the ratios would be 1.0. This would mean that Hispanics are no more likely to be stopped than non-minorities.

As we have indicated earlier, there is generally less inter rater reliability when Hispanic motorists/pedestrians are being enumerated than when Black motorists/pedestrians are being counted. In our previous work the inter rater reliabilities have been in the range of .81 to .85 when Hispanics are the larger minority as opposed to .91 to .95 when Blacks are the larger minority. For this reason, in addition to the lesser reliability of officers’ perceptions with regard to the stop data, we have taken the position that odds ratios need to be adjusted for this lower reliability.

Odds ratios between 1.0 and 1.7 generally are seen as benign. Ratios between 1.7 and 2.2 provide an indication that a review of stops in these locations could be conducted. Ratios above 2.0 point to the potential targeting of minority motorists, and further action may be required from the agency. The community demographics and inter-rater reliability must be considered, however, when discussing these guidelines.

As Table 4 shows, 12 odds ratios are below 1.0, with 1 more being exactly 1. Eighteen more odds ratios are from 1.1 to 1.7, with 6 more being 1.8 to 2.2. Two odds ratios are above 2.2.

The highest odds ratio is a pedestrian location at North Star Mall, with the next largest being at W. Military and US 90.

If these data are collapsed and an odds ratio is computed (considering that 36,057 Hispanic motorists were stopped and, based upon the benchmark data, one would expect that 34,087 Hispanic motorists would be stopped), the overall odds ratio is 1.2, low in the benign area, indicating that overall no profiling of Hispanic motorists is occurring.

There are, however, two areas where it would be wise for the SAPD to review the stops of Hispanic motorists. First, it should be noted that there are a substantial number of areas in which the odds ratio is smaller than would be expected. The high odds ratio at the North Star Mall area is of particular concern and has some special circumstances relating to it. In evaluating this location, we determined that 58% of the persons who were described as suspects of a crime and 58% of individuals arrested at this location were Hispanic. The benchmark of Hispanic motorists/pedestrians at this location was 30.3% and this much higher percentage of Hispanic suspects described to officers responding to the location would be expected to result in more stops of Hispanics than the benchmark would suggest. While we know that would result in a lower odds ratio, we cannot know exactly how much from a quantitative point of view, because each time an officer was informed that a suspect was Hispanic, there could be a number of stops resulting from that information. It should be pointed out that there is a close correspondence between the percentage of Hispanic suspects (58%) and the percentage of Hispanic stops (57.8%) at the location. This close correspondence lends additional support to the suggestion that the higher than expected stops of Hispanics at this location is associated with the proportion of Hispanics described as suspects. Nevertheless, we think the North Star Mall and

W. Military and US 90 locations should be scrutinized in future years to assure that there is no targeting of Hispanics in these areas.

While we recommend that the SAPD remain vigilant about all areas of the City, we do not want this recommendation to be misconstrued. Overall, the results of the stop data in San Antonio are among the best that we have seen to date in the jurisdictions where we have assessed racial profiling. To give some perspective to the situation, there have been overall odds ratios as high as 4.85 in other jurisdictions, and several that we have seen in the mid 3 range. To have an overall odds ratio of 1.2, means that overall there is no evidence of profiling. That there will be variation about that 1.2 average is inevitable, and we will continue to recommend that the areas that are higher than expected be scrutinized.

DISCUSSION

It is possible in the SAPD database to differentiate between officer initiated and dispatched stops. That is, officer initiated stops are those that the officer decides to make on his/her own initiative. Dispatched stops are those that are primarily the result of information from a third party indicating that the officer should be on the lookout for a specific type of individual or one that is thought to be suspicious by the third party. It is interesting to note that, as in other jurisdictions, dispatched calls that result in a stop target a somewhat higher proportion of minorities than do officer-initiated stops. The data are contained in Table 5.

Table 5 - Dispatched and Officer Initiated Calls by Race/Ethnicity

Race/Ethnicity	Dispatched	Officer Initiated	Total
Black	11.6%	10.2%	10.4%
Hispanic	63.7%	60.2%	60.7%
White	24.1%	28.2%	27.7%

As can be seen in Table 5, when a third party provides information to the officers, they are more likely to stop a minority motorist and less likely to stop a White motorist. While the differences are not large, they point out an important component of the whole racial profiling debate. That is, while the debate on racial profiling has concentrated on the police, society seems to be somewhat more targeted on minorities when they provide information and ask the police to act upon it. The police are in a situation where it is difficult if not impossible for them not to respond when a third party provides information concerning behavior that might result in a stop. While we have not differentiated officer initiated stops from dispatched stops because it was not possible to differentiate with great precision different types of dispatched calls and the differences are not large, we should point out that the odds ratios that we report for stops of

Blacks and Hispanics would likely be slightly lower if we could make the appropriate distinctions.

Searches

While the discussion surrounding racial profiling has traditionally centered on inappropriate traffic stops, the issue of inappropriate searches has more recently become an issue for review in this field. The post-stop activity is neither as researched as benchmarking for stops, nor is it as simple as it may appear. As in all the agencies we have worked with, there are several different types, or categories of searches identified in the SAPD database. The search types are: consensual, incident to arrest, inventory, and probable cause. Incident to arrest and inventory searches are obligatory for the officer. That is, when a suspect is arrested a search is required, and when a vehicle is impounded a search is required. The other two search types, probable cause and consensual searches, are not obligatory for the officer. If the officer has probable cause for searching the search may proceed on that basis. If not, the officer may ask for consent to search and proceed if it is granted. These factors mean that all searches are not equal when conducting analysis on whether minorities are being searched more frequently than they should. For this reason, it makes sense that the higher discretion searches, probable cause and consensual searches would provide a more accurate picture of whether minorities are the targets of searches.

There are other factors to consider when conducting this analysis. There is no standard benchmark to which the proportion of searches of minorities can be compared. Some have argued that the percentage of stops of a targeted group should be considered as a benchmark. This percentage could then be compared to other groups' stop/search percentage to look for bias.

This suggestion, while having some merit must be further refined if it is to serve as a benchmark. The proportion of stops of minorities typically varies by area of the city, as does the proportion of searches of minorities. Some areas of the City have heavier deployments of police than do others based on such factors as crime, citizen calls for service and the like. Some types of deployments, particularly those aimed at reducing crimes plaguing a specific area may have guidelines to seek to search more aggressively than do regular patrol deployments. Thus, it is not a simple matter to decide upon an appropriate benchmark nor is it an easy task to quantify that benchmark. Instead of attempting to specify a benchmark, as we have with the stop data, we will discuss searches in the context of some of the variables that affect them.

Let us first look at searches of Blacks and Hispanics by the SAPD over all. Those data are contained in Table 6.

Table 6 - Searches of Blacks and Hispanics by Search Category

	Consensual	Incident to Arrest	Inventory	Probable Cause	Average
Blacks	21.8%	11.6%	9.0%	19.5%	13.3%
Hispanics	55.9%	68.5%	66.3%	60.1%	66.5%

When one compares the overall percentage of searches of Blacks and Hispanics to the percentage of stops of Blacks (10.4%) and Hispanics (60.7%), there is a slight elevation of searches over stops. That is, overall 10.4% of the stops are of Blacks, while 13.3% of the searches are of Blacks. The same is true of Hispanics, 60.7% of the stops are of Hispanics, while 66.5% of the searches are of Hispanics. If we use the percentage of Black stops as the expected benchmark for the percentage of Black searches and compute an odds ratio for searches of Blacks overall, the odds ratio is 1.3, in the benign area. The same computation for Hispanics also results in an odds ratio of 1.3. Neither of these odds ratios reaches a level that we would

regard as exhibiting profiling for either Blacks or Hispanics. However, there is quite a different pattern for the different types of searches. For example, searches that are incident to arrest are slightly higher than total searches for Hispanics, but lower for Blacks. On the other hand, consensual searches are considerably higher than overall searches for Blacks but lower for Hispanics.

We will concentrate on consensual searches for two reasons. First, consensual searches are the searches which are most likely to reflect profiling if it is going on. The reason for this is that officers do not have to articulate a reason for the search. They merely have to ask the motorist for permission to conduct the search and proceed if it is granted. The other types of searches have specified conditions before they can be carried out. Secondly, the most substantial difference in Table 6 is the difference between consensual searches and stops of Blacks. By doing this we are considering the largest discrepancy that exists in these data and the reader should be aware that this discussion is undertaken to attempt to understand whether there are explanations for this discrepancy.

First, we should look at the area of the City in which these searches take place. Half of the searches of Blacks take place in the East district. Further, the East District, being a high crime area, has a larger number of officers per capita than do all other districts save the Central District. There are a third more officers per 100,000 citizens than for the City overall. Overall, the city has one officer for each 1281 citizens, but in the East District, the ratio is one for each 958 citizens. Because there are more officers in the area whose duty is to help alleviate crime, it is reasonable to assume that they will carry out more searches. Overall in the City, there were about 612 consensual searches for each 100,000 citizens. In the East District, there were 1041 consensual searches for each 100,000 citizens. East is second only to the Central District which

had the highest ratio of officers to population and the highest number of searches per 100,000 citizens. While we cannot say exactly how many more searches of Blacks would be expected to occur because of the increased deployment in the East District, we can say that it is important.

Another reason for the larger proportion of searches of Blacks may be the effect of Directed Patrols in target areas of the City. These areas are selected by the SAPD because of high crime in the area, quality of life issues and requests from citizens. Some of these requests come through City Council members who represent areas where residents are concerned about these issues. In 2002, the target areas were roughly half residential and half commercial. Officers who are assigned to this type of duty are expected to investigate anything that is suspicious and would be more likely to request consent to search if they thought there was a reasonable chance that they would uncover some evidence relating to crime. As evidence of this, a motorist stopped by one of the Directed Patrol Officers in a target area is about twice as likely to be asked for consent to search as a motorist who is stopped by other types of patrols. Overall, 2.4% of motorists stopped were searched after the officer asked for consent, while for the Directed Patrols, 4.6% of the motorists stopped were searched consensually.

During 2002, there were 27,433 stops in target areas. Of these, 14.79% were of Black motorists. This, of course, is elevated over the 10.4% Black motorists who were stopped citywide. Additionally 24% of the consensual searches of Blacks were done by Directed Patrols in target areas of the City. This is an elevated number of consensual searches of Blacks because they were stopped in target areas and thus had a higher probability of being asked for consent to search. The higher proportion of stops of Black motorists in target areas, coupled with higher search rates in target areas could also account for the seemingly higher consensual search rates of Blacks overall. Yet another issue to consider is the proportion of Black individuals on probation

and parole and how this might affect the rate of searching Blacks. First we turn to individuals on probation and parole who reside in San Antonio. There are approximately 44,000 people on probation or parole in Bexar County. Of these, 14.1% are Black, which is a considerably higher percentage than the Black population of the county. Officers coming into to contact with persons with criminal histories, or on parole/probation during traffic stops will be more likely to ask for consent to search the vehicle. When officers stop motorists for a traffic violation a “wanted” check is performed upon the person. The check reveals the person’s driver’s license information, local, state, or national warrants, and a State Identification Number (SID#). When the officer runs the SID# it shows the criminal booking history for the subject for offenses within Bexar County. If an officer observes an extensive or recent criminal history the officer would probably ask if the person is on parole, probation and/or for a consent to search. Additionally, when a vehicle registration is run, which is routine during a traffic stop, the vehicle could be listed as a suspect vehicle in the police database as being involved in a crime which would again increase the likelihood of the driver being asked for consent to search the vehicle. Unfortunately, at this time, the SAPD officers do not record the fact that they have received information from their “wanted” check that indicates the motorist has an extensive criminal record. Therefore, we do not have data that would allow us to quantify how much more likely a motorist on probation or parole would be to be asked for consent to search.

For the three reasons detailed above, the proportion of Blacks who are asked for consent to search would be elevated. We cannot quantify how much each of these variables would add to the proportion of Blacks in the pool of motorists who are asked for consent to search, but we can say that it would be substantial. Given that there are approximately 30% more officers assigned to the East District, that the proportion of Blacks stopped by Directed Patrol officers, who are

more likely to ask for consent to search, is roughly 45% higher than Blacks stopped by other officers and that those who are on probation or parole are more likely to be asked for consent to search than are those not on probation or parole, there undoubtedly are more Black motorists asked for consent to search for these reasons.

Another indication of differential treatment of minorities in searches has been the duration of the search. In at least one other study it was found that the searches of Black motorists took a much longer time than the searches of White motorists. That is not true in San Antonio. The searches of Whites took an average of 24.2 minutes, of Hispanics 24.1 minutes and it took an average of 22.9 minutes for the searches of Blacks.

HIT RATES

One of the most consistent findings with regard to searches, particularly consent searches, concerns the hit rates for these searches by race/ethnicity. Hit rate means the rate at which contraband is found when an individual or vehicle is searched during a search. It should be noted that consent searches typically have the lowest hit rates because officers have no legal reason to search; rather it is their experience that leads them to search that particular individual or vehicle. The hit rates for consensual searches are presented in Table 7.

Table 7 - Hit Rates for Consensual Searches by Race/Ethnicity

Race/Ethnicity	No. Searched	No. Contraband Found	Hit Rate
Black	1526	223	14.6%
Hispanic	3910	583	14.9%
White	1501	258	17.2%

The first thing to note about these data is that they are entirely consistent with data from numerous other jurisdictions which indicates that consensual searches of minorities do not result in higher hit rates. Contrary to the belief of many, data from Hit Rate studies consistently finds that minorities are no more likely to be carrying contraband than are non-minorities. Thus, any argument that it is more productive to search minorities is contradicted by these data.

It is also of interest to note the hit rates for probable cause searches. These data are found in Table 8.

Table 8 - Hit Rates for Probable Cause Searches by Race/Ethnicity

Race/Ethnicity	No. Searched	No. Contraband Found	Hit Rate
Black	1490	520	34.9%
Hispanic	4583	1537	33.5%
White	1498	601	40.1%

As would be expected, there are higher hit rates for probable cause searches than for consensual. As officers have an articulable reason for searching, it would be expected that they would find contraband in a higher proportion of motorists. The pattern of hit rates for probable cause searches is similar to the pattern for consensual searches. That is, contraband is found on Whites at a somewhat higher rate than it is for Hispanics and Blacks. There is no indication in these data that searching minorities result in more arrests. If anything, the converse is true. As with consensual searches, these data support the notion that it is not productive to search minorities more than non-minorities.

CONCLUSIONS

The overall odds ratio of 1.3 for Black motorists is one of the lowest odds ratios with regard to Blacks that we have seen in our analysis of jurisdictions around the country. While there is little evidence overall that the SAPD is targeting Black motorists for stops, two of the odds ratios, at Broadway and Mulberry and Lombrano and Hamilton suggest otherwise. The high odds ratios at these two locations should be closely monitored by the department to determine whether these locations are simply idiosyncratic in these data, or are locations that continue to show high activity and odds ratios or both. As we have said, there is inevitably variation around the average of stops for Black motorists for the department as a whole and some of the elevation at these two locations may be the result of chance. Furthermore, the closing of a convenience store, which was the focus of much police activity at Broadway and Mulberry, may have had a role in the elevation of the stops of Blacks there. The fact that there is a recreational center at Lombrano and Hamilton, which was not in operation during the hours when benchmarking sessions were conducted, may have affected that location. Nevertheless, the department should be concerned about odds ratios that are this high.

The odds ratio for stops of Hispanic motorists is even lower than that for Blacks at 1.2. Indeed, this odds ratio is very close to the expected value. Nevertheless, there are two odds ratios that are above 2.2, those at North Star Mall and at W. Military and US 90. As with the high ratios for Black motorists, the SAPD should continue to monitor these locations to determine if these results are repeated in future years. However, there are several locations where Hispanic motorists are stopped far less frequently than would be expected, specifically those at Lombrano and Hamilton, Commerce and Presa and I-10 and Woodlawn.

The issue of searches of Black motorists, particularly consensual searches, is not as clear-cut. Unfortunately, search benchmarks are not as established as traffic stop benchmarks. At first the consensual searches seem high. However, upon further investigation, we have found three reasons that might increase the proportion of searches of Black motorists:

- The East District, where half of the searches of Blacks occurred, has a higher per capita deployment of police officers than any other district save Central.
- Directed Patrols in target areas of the City accounted for 24% of the searches of Black motorists. These patrols are sent to specific areas of the City based on crime, quality of life issues and/or at the request of citizens of specific areas. The patrols are twice as likely to consensually search motorists, as are other patrol units in the department. This also could account for a portion of the elevated number of searches of Black motorists.
- The third reason, which may account for a portion of the elevated proportion of searches of Black motorists, is that the individuals who are on probation or parole and are more likely to be consensually searched are more heavily Black than the population of San Antonio.

While we cannot quantify how much each of these reasons would increase the number of Black motorists searched, we can say that the apparent disparity would be reduced. Further, we noted that the duration of searches of Black motorists was slightly lower than the duration of searches for White motorists, indicating that Black motorists are not subjected to longer searches as they have been in other jurisdictions.

RECOMMENDATIONS

We recommend that the SAPD continue to collect data as mandated by Senate Bill 1074, including the additional data that they have been collecting.

We recommend that the SAPD consider making changes in their data collection system to:

- A. Add a data field to their data collection form that will allow officers to note that they have noted an extensive criminal background when they do a license check. This will allow a quantification by race/ethnicity of those individuals who may be consensually searched for that reason.
- B. Add a data field to the data collection form to indicate that a citizen had been asked for consent to search. This will allow analysis of consensual searches to include those individuals who refuse consent to search.
- C. Allow officers to more clearly indicate that the stop being made is based on third party information. This will allow for a more definite differentiation between officer initiated stops and stops that are based on information from others.

The SAPD should monitor those locations where the odds ratios were high enough to require a review by the department. These locations, four with regard to Black motorists and 2 with regard to Hispanic motorists should receive careful monitoring during analysis of the 2003 data to determine if these are locations that have disparities in the next data analysis phase.

We recommend that the SAPD consider providing officers training that is specifically designed to target racial profiling, including information that informs officers about when they can and cannot use race, behavioral profiling, what the hit rates for searching Black and Hispanic motorists are and other subjects that are specifically targeted to helping officers deal with the proper and improper use of race in policing.

The agency and the community should continue the excellent cooperation that they have evidenced on this project to date. The first step is in the assimilation and dissemination of this report to the community and to officers in the department. This should help in looking to the future to enhance community police cooperation. This cooperation can potentially help both communities in understanding police activity and police officers in helping understand how the community views those activities. The ultimate result of police-community cooperation is a better police department and a safer and better community.

The SAPD should work to audit police stop data by encouraging more officers to call in all traffic stops to the dispatcher. Presently, there is not sound methodology to check the stop data that are collected with other monitoring strategies, such as Computer Aided Dispatch. Presently the department has an excellent record in having data race/ethnicity identified and in locating the stops. However, having more traffic stops called in to the dispatcher would enhance officer safety and allow for a more thorough audit of stop data.

APPENDIX A – CHI SQUARES

Whereas odds ratios provide a good analysis of the probabilities of being stopped for each racial/ethnic group, the chi-square analysis takes into consideration sample sizes (number of stops of each group) to determine the likelihood of observed differences due to chance. By convention, statisticians use the .05 level of probability to determine the statistical significance of an analysis. That is, if the observed result would occur five or fewer times out of a hundred, then it is treated as a real result, not a chance finding. As probabilities decrease, we become more confident that the result is real, so probabilities normally are reported as statistically significant if they are .05 or less.

Unlike odds ratios, the chi square statistic is sensitive to sample size. When conducting chi square analyses on large samples, as in this case, small observed differences might reach statistical significance due to the size of the sample. That is, differences might be statistically significant but not meaningful. Thus, it is important to consider the results of the chi square analyses and odds ratios together to consider whether statistically significant differences are in fact meaningful differences.

The results of the chi square analyses for each of the benchmark locations for Blacks are presented below. Note that the analysis does not differentiate between statistically significant results that result from fewer stops than would be expected or from more stops than would be expected of Blacks. Of the 39 locations, 20 are statistically significant. One of these is of a location at which Blacks were stopped less than would be expected. Nineteen of the locations have chi squares that are not statistically significant.

Table 9 – Race Chi Square Analysis for Black Motorists

Location	Chi Square	Probability
I-10 & Fresno	0.19	ns
S.W. Military & Tacoma; S.W. Military & Pleasanton	0.18	ns
S.W. Military & Zarzamora	2.69	ns
Guadalupe & S. Zarzamora	1.76	ns
Wheatley Courts	2.38	ns
Lombrano & Hamilton	83.73	≤ 0.001
Commerce & Presa	2.51	ns
I-410 & Marbach	0.05	ns
San Pedro & Cypress	9.91	≤ 0.01
Loehman's Village	0.12	ns
I-10 & Hildebrand	12.01	≤ 0.001
I-35 & US 90	0.37	ns
I-410 & Perrin Beitel	46.06	≤ 0.001
I-10 & Woodlawn	14.19	≤ 0.001
I-410 & Broadway	4.93	≤ 0.05
I-10 & Wurzbach	42.37	≤ 0.001
Market & Bowie	5.76	≤ 0.025
US 281 & I-35	8.93	≤ 0.01
US 281 & N. St. Mary's	0.02	ns
I-410 N.W. & Ingram	11.81	≤ 0.001
US 281 & Hildebrand	0.03	ns
I-10 & Medical	7.24	≤ 0.01
I-410 & Starcrest	19.59	≤ 0.001
Pin Oak & Oaklawn	21.35	≤ 0.001
I-10 & Vance Jackson	1.89	ns
Broadway & Mulberry	189.74	≤ 0.001
US 281 & Basse	0.048	ns
I-35 & Walzem	2.23	ns
Commerce & Main Plaza	6.53	≤ 0.025
W. Commerce & Gen. McMullen	1.23	ns
I-410 N.E. & US 281	0.02	ns
I-410 & Culebra	15.04	≤ 0.001
North Star Mall	7.21	≤ 0.01
I-410 & Harry Wurzbach	2.06	ns
I-10 & West	0.87	ns
I-10 & DeZavala	8.66	≤ 0.01
I-10 & Fredericksburg	11.25	≤ 0.001
W. Military & US 90	7.84	≤ 0.01
I-37 & New Braunfels	0.02	ns

The results of the chi square analyses for each of the benchmark locations for Hispanics are presented below. Note that the analysis does not differentiate between statistical significance

that results from fewer stops than would be expected or from more stops than would be expected of Hispanics. Of the 39 locations, 31 are statistically significant. Of these 7 indicate statistical significance for too few stops of Hispanics and 24 indicate that too many Hispanics were stopped. There are 8 locations at which the chi squares are not significant.

Table 10 – Ethnicity Chi Square Analysis

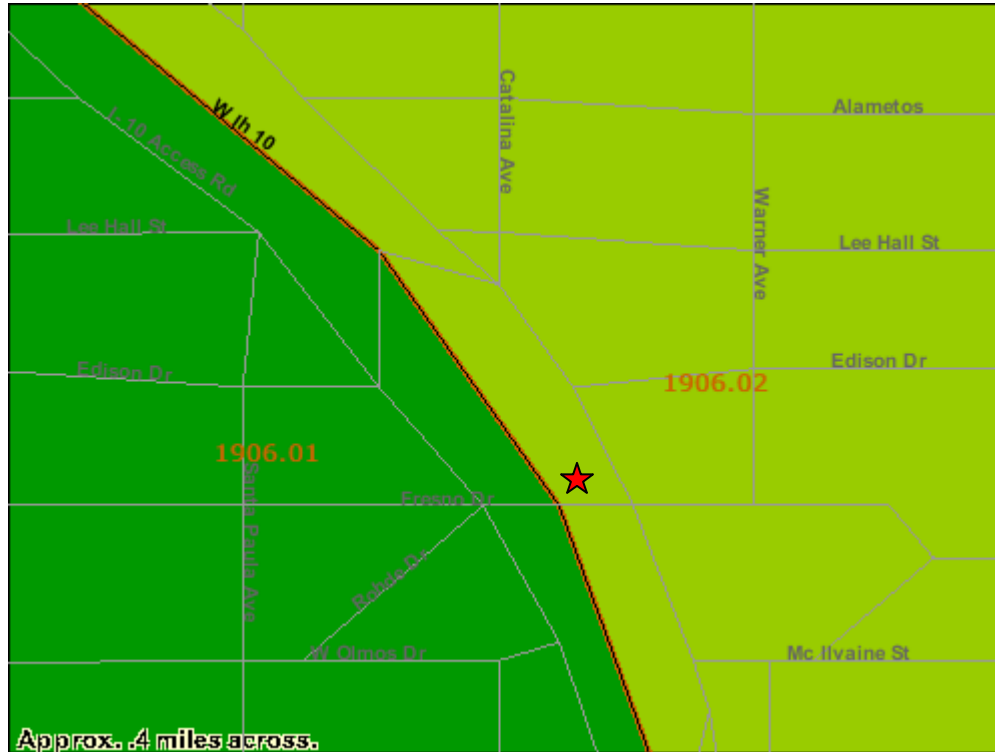
Location	Chi Square	Probability
I-10 & Fresno	5.52	≤ 0.025
S.W. Military & Tacoma; S.W. Military & Pleasanton	22.71	≤ 0.001
S.W. Military & Zarzamora	48.22	≤ 0.001
Guadalupe & S. Zarzamora	0.04	ns
Wheatley Courts	4.10	≤ 0.05
Lombrano & Hamilton	113.12	≤ 0.001
Commerce & Presa	20.64	≤ 0.001
I-410 & Marbach	51.42	≤ 0.001
San Pedro & Cypress	4.65	≤ 0.05
Loehman's Village	48.99	≤ 0.001
I-10 & Hildebrand	1.90	ns
I-35 & US 90	13.31	≤ 0.001
I-410 & Perrin Beitel	13.17	≤ 0.001
I-10 & Woodlawn	14.02	≤ 0.001
I-410 & Broadway	6.08	≤ 0.025
I-10 & Wurzbach	45.64	≤ 0.001
Market & Bowie	0.50	ns
US 281 & I-35	71.27	≤ 0.001
US 281 & N. St. Mary's	43.42	≤ 0.001
I-410 & Ingram	12.00	≤ 0.001
US 281 & Hildebrand	68.68	≤ 0.001
I-10 & Medical	22.27	≤ 0.001
I-410 & Starcrest	0.50	ns
Pin Oak & Oaklawn	4.90	≤ 0.05
I-10 & Vance Jackson	3.59	ns
Broadway & Mulberry	1.62	ns
US 281 & Basse	16.62	≤ 0.001
I-35 & Walzem	54.44	≤ 0.001
Commerce & Main Plaza	5.52	≤ 0.025
W. Commerce & Gen. McMullen	25.42	≤ 0.001
I-410 N.E. & US 281	35.71	≤ 0.001
I-410 & Culebra	25.61	≤ 0.001
North Star Mall	177.86	≤ 0.001
I-410 & Harry Wurzbach	4.65	≤ 0.05
I-10 & West	3.66	ns

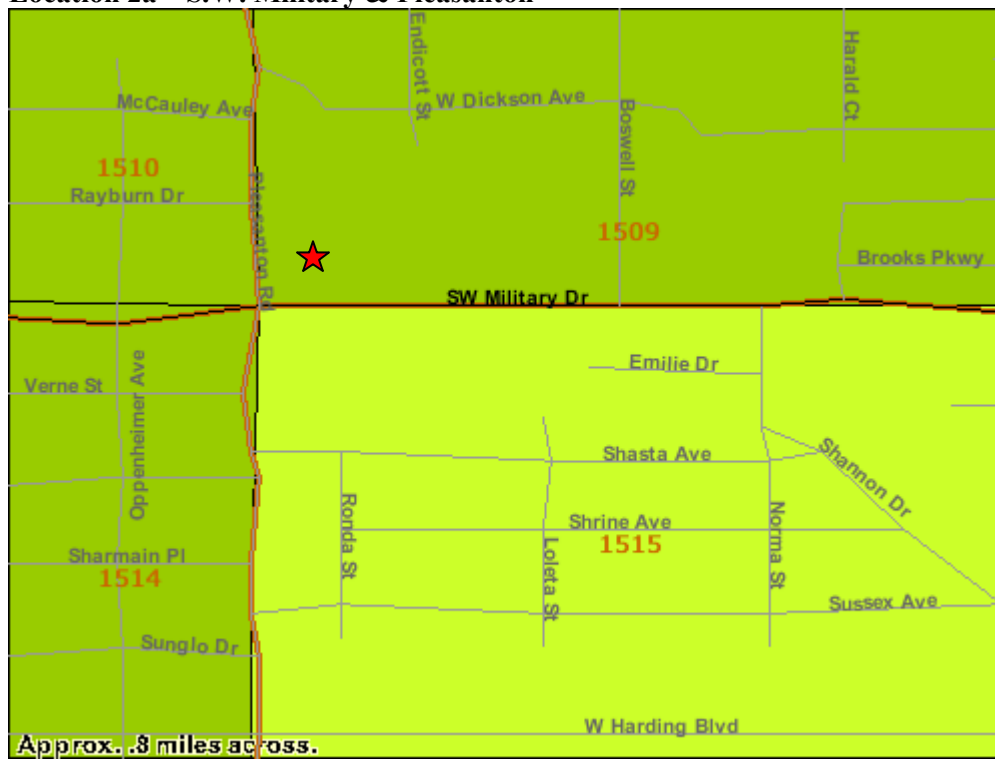
Location	Chi Square	Probability
I-10 & DeZavala	31.86	≤ 0.001
I-10 & Fredericksburg	25.89	≤ 0.001
W. Military & US 90	59.11	≤ 0.001
I-37 & New Braunfels	1.10	ns

APPENDIX B - MAPS

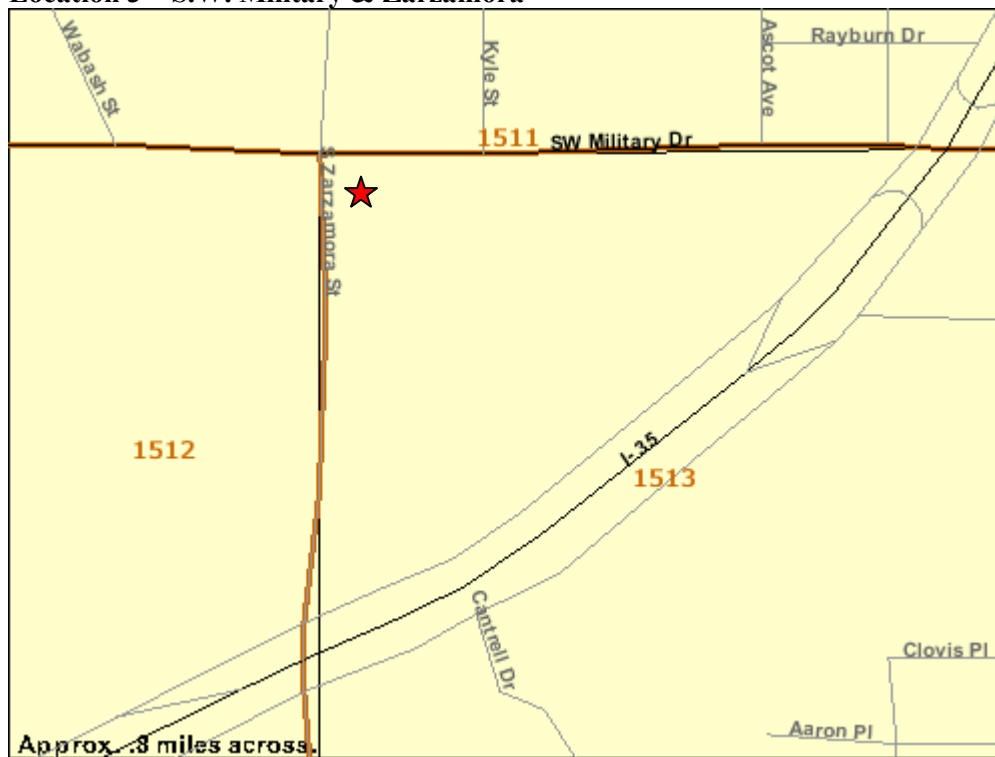
This section contains maps of the benchmark locations surveyed in San Antonio.

Location 1 - I-10 & Fresno



Location 2a – S.W. Military & Pleasanton**Location 2b – S.W. Military & Tacoma**

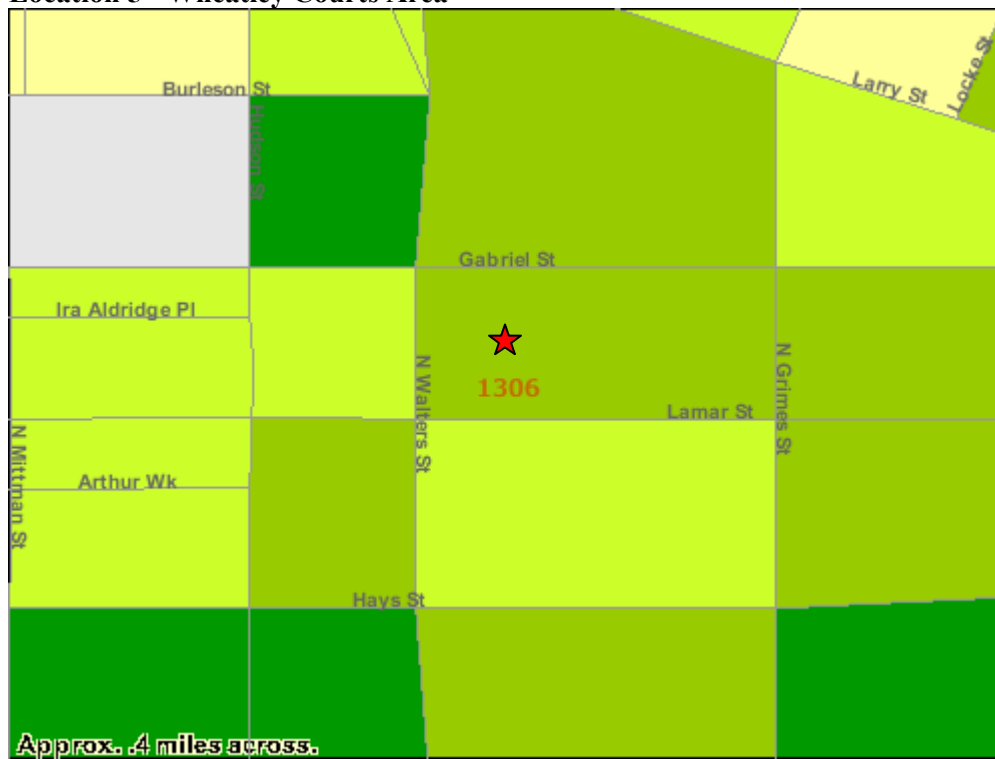
Location 3 – S.W. Military & Zarzamora



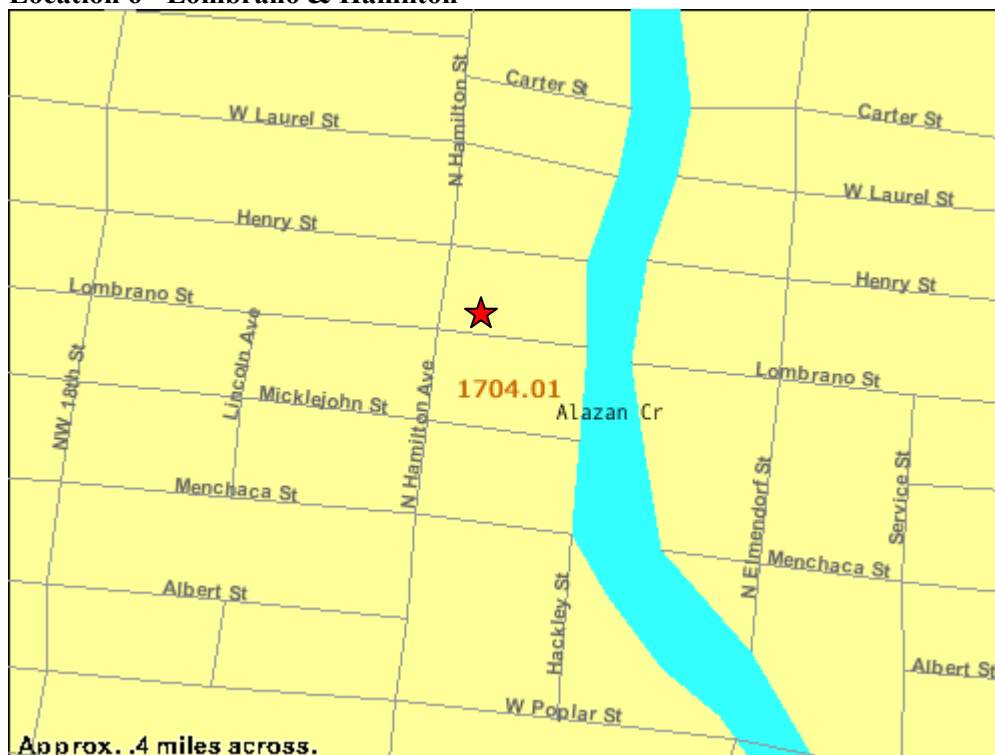
Location 4 - Guadalupe & Zarzamora

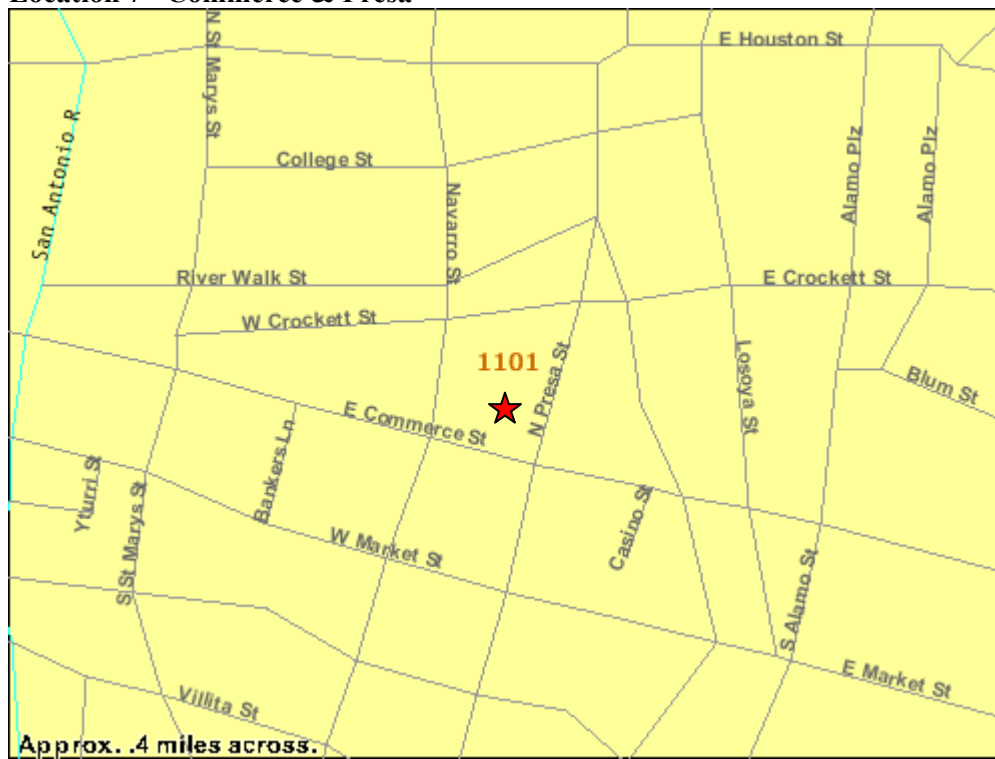
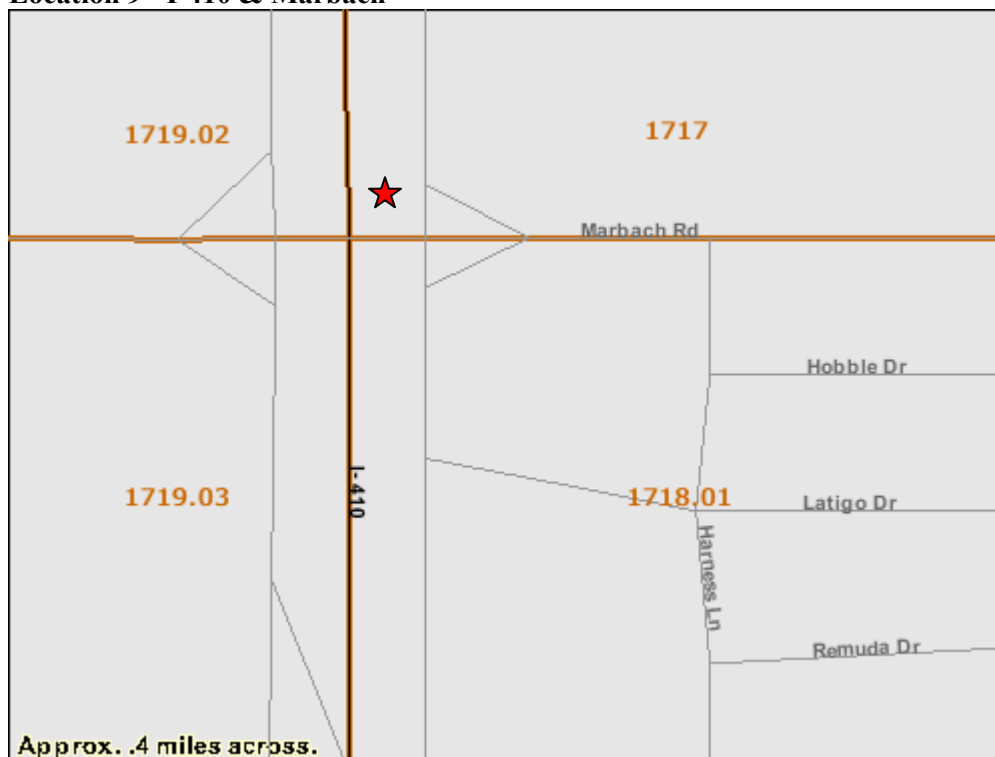


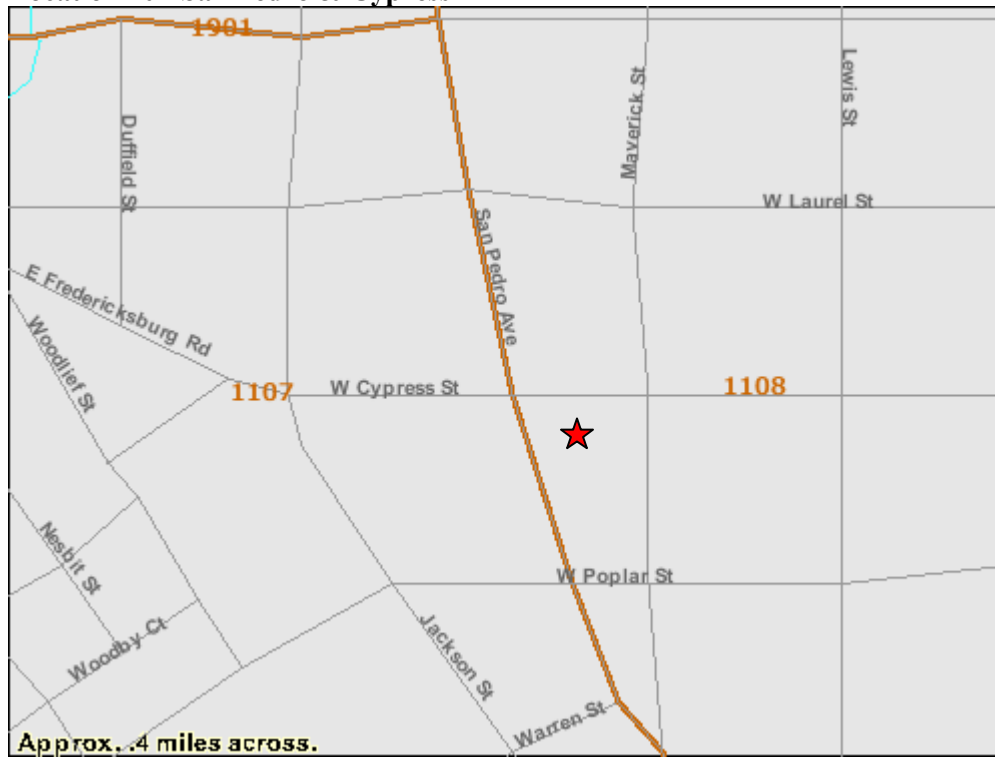
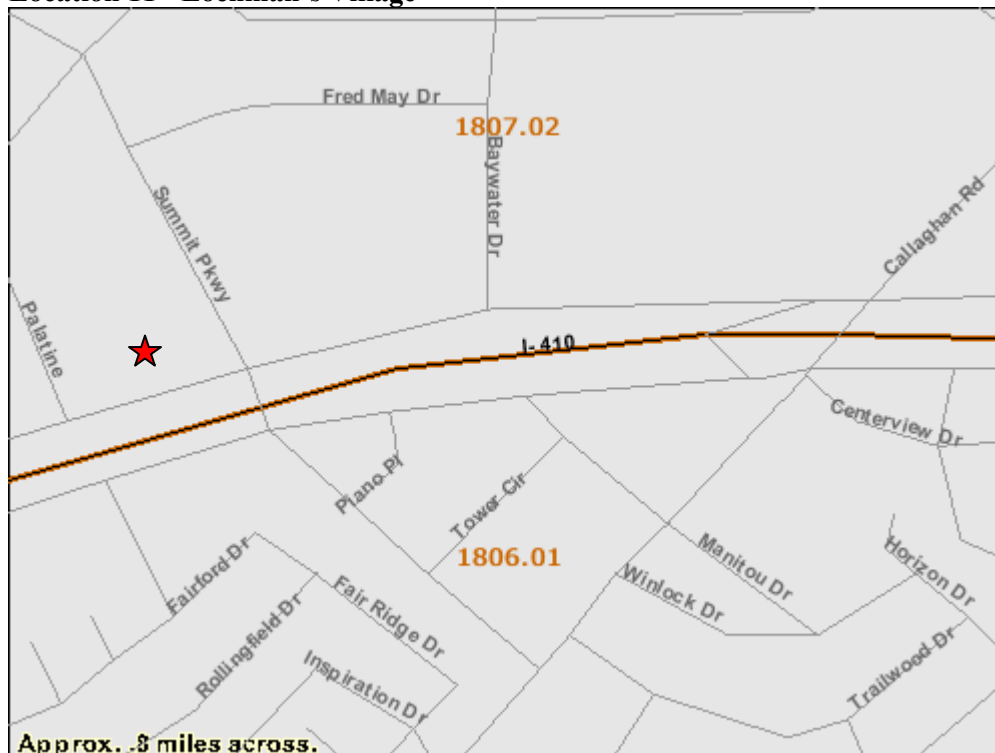
Location 5 - Wheatley Courts Area



Location 6 - Lombrano & Hamilton



Location 7 - Commerce & Presa**Location 9 - I-410 & Marbach**

Location 10 - San Pedro & Cypress**Location 11 - Loehman's Village**

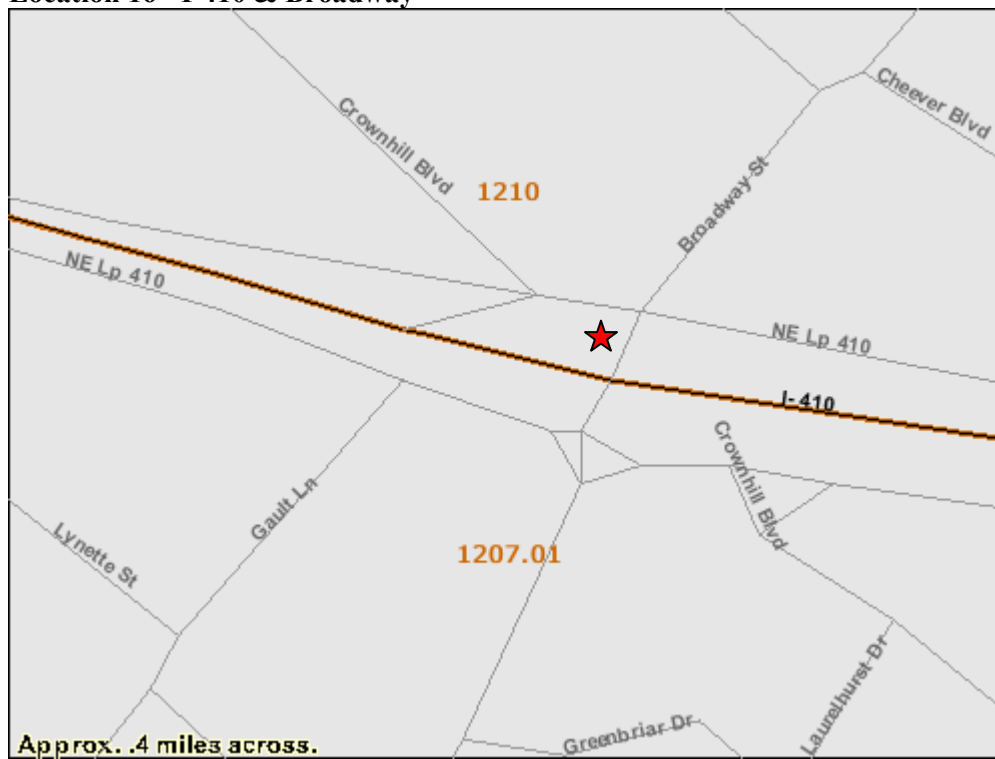
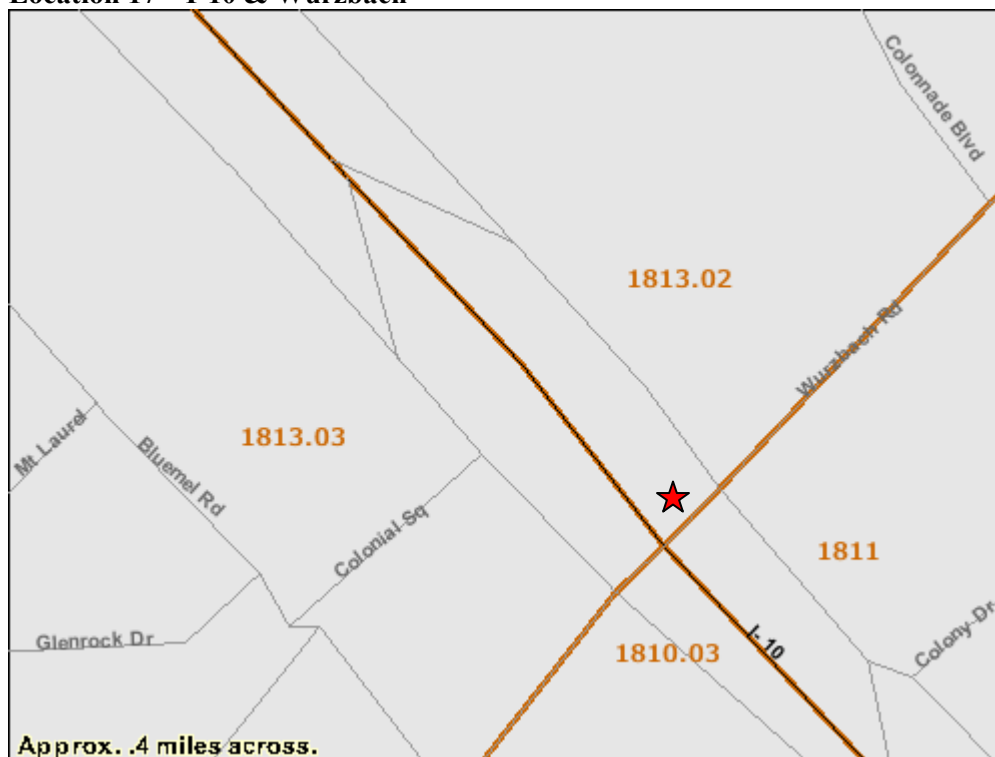
Location 12 - I-10 & Hildebrand

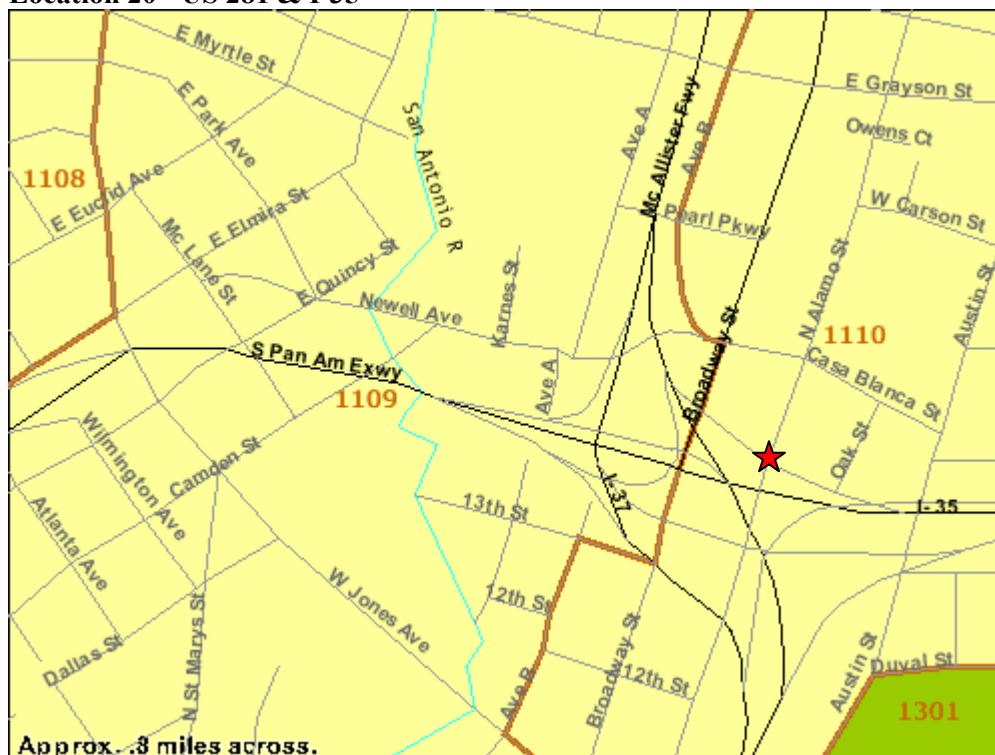


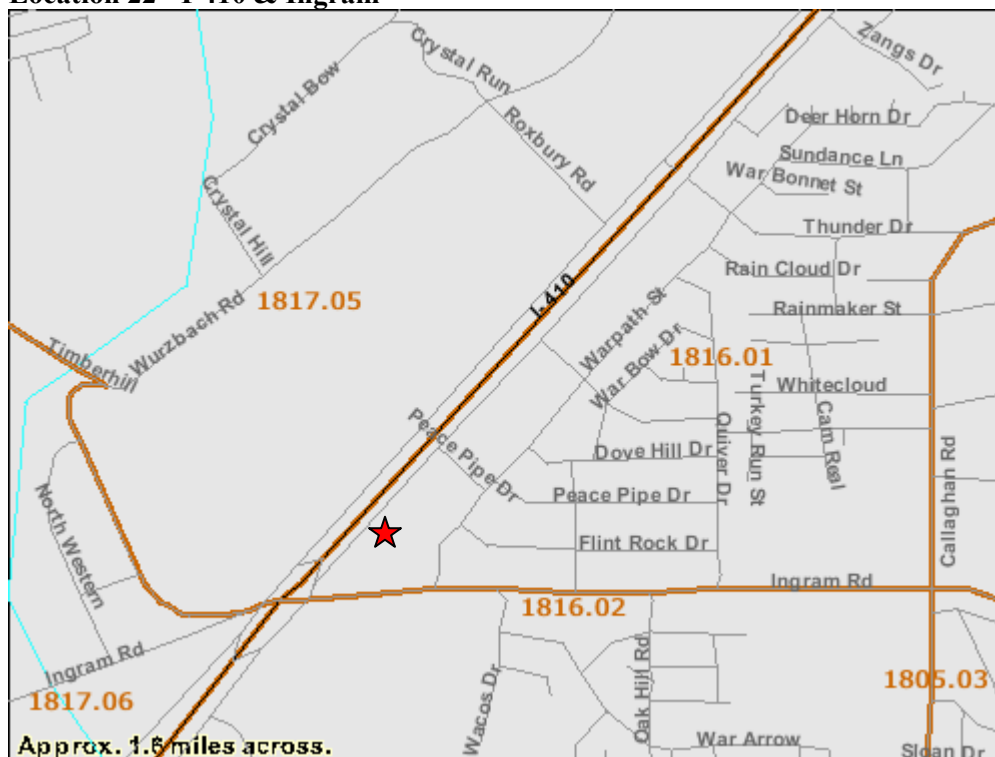
Location 13 - I-35 and US 90



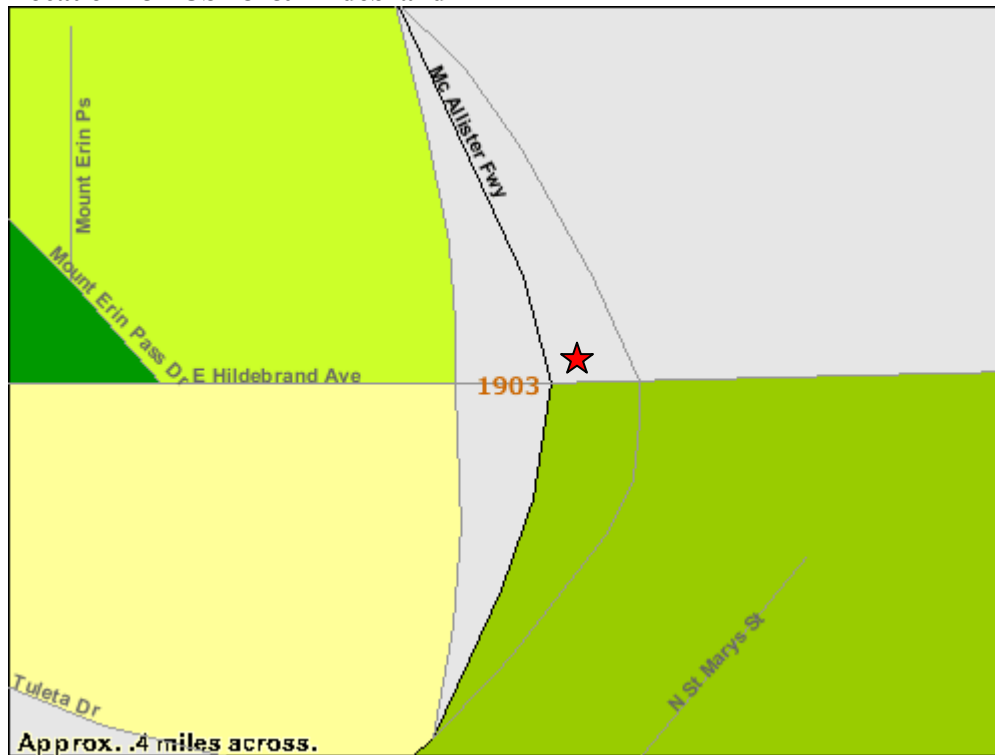
Map showing the area around 1212.04 and 1209.02. Streets include Norwalk Pl, Barrington St, Hillswind St, Stathmore Dr, Willow Green Dr, Bretton Rd, Garden Quarter St, Kings Pl, and Perrin Beitel Rd. A red star marks a location near 1209.02. The map also shows Tulsa Park, Wadsworth, and Starnest Dr. A note at the bottom indicates "Approx. .8 miles across."

Location 16 - I-410 & Broadway**Location 17 - I-10 & Wurzbach**

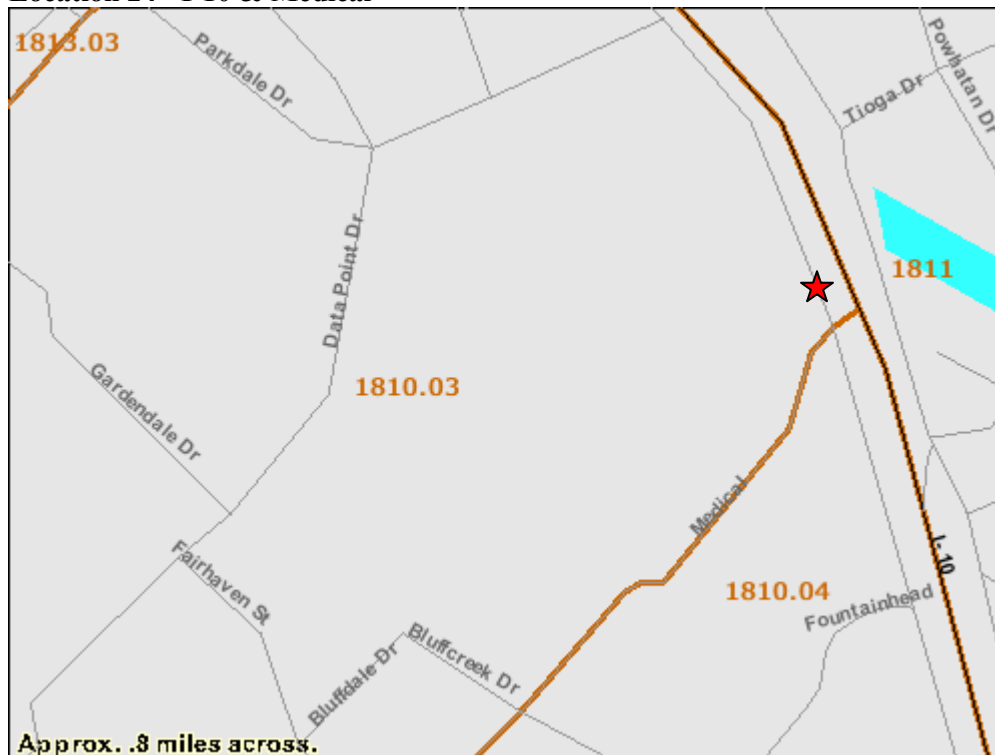
Location 18 - Market & Bowie**Location 20 - US 281 & I-35**

Location 21 - US 281 & N. St. Mary's**Location 22 - I-410 & Ingram**

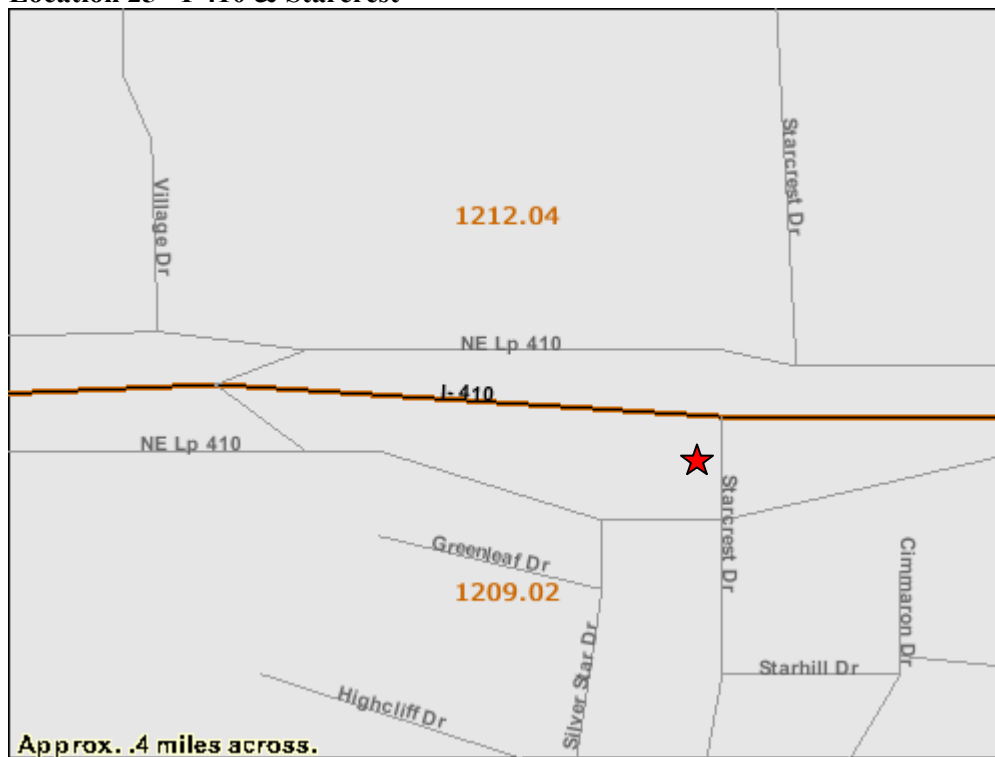
Location 23 - US 281& Hildebrand



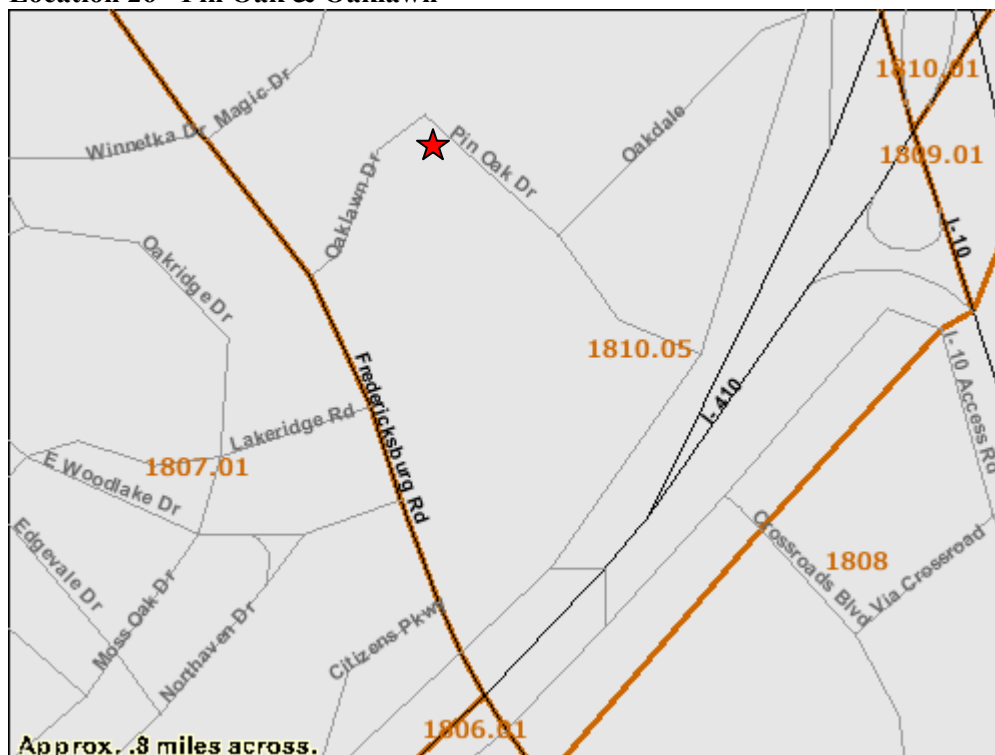
Location 24 - I-10 & Medical



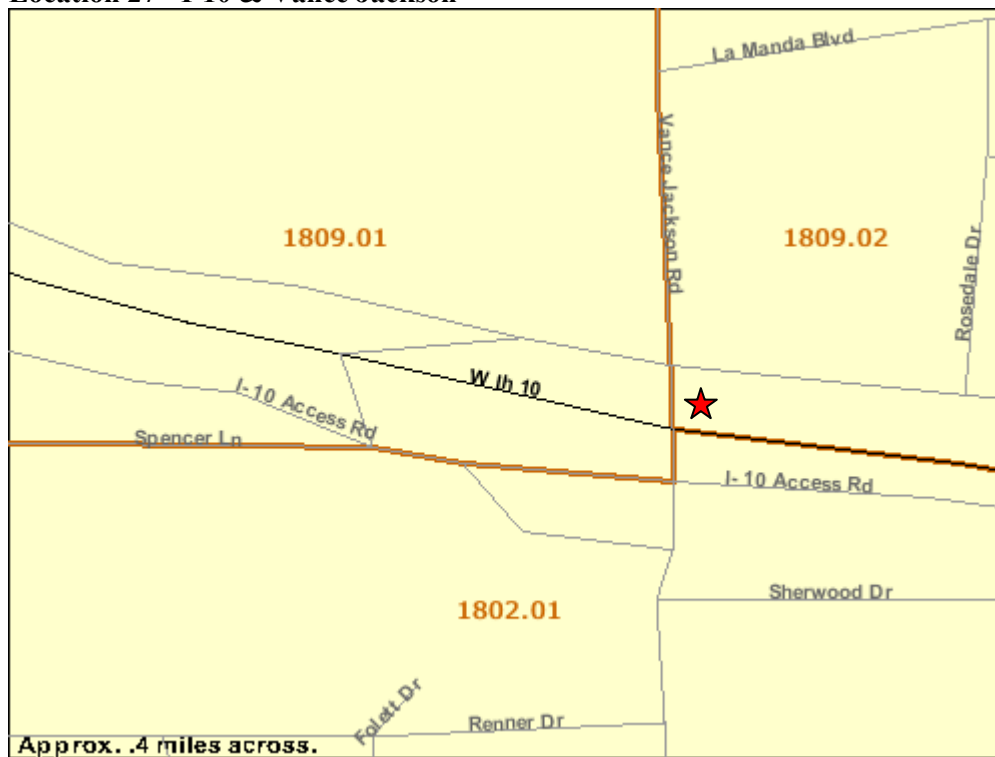
Location 25 - I-410 & Starcrest



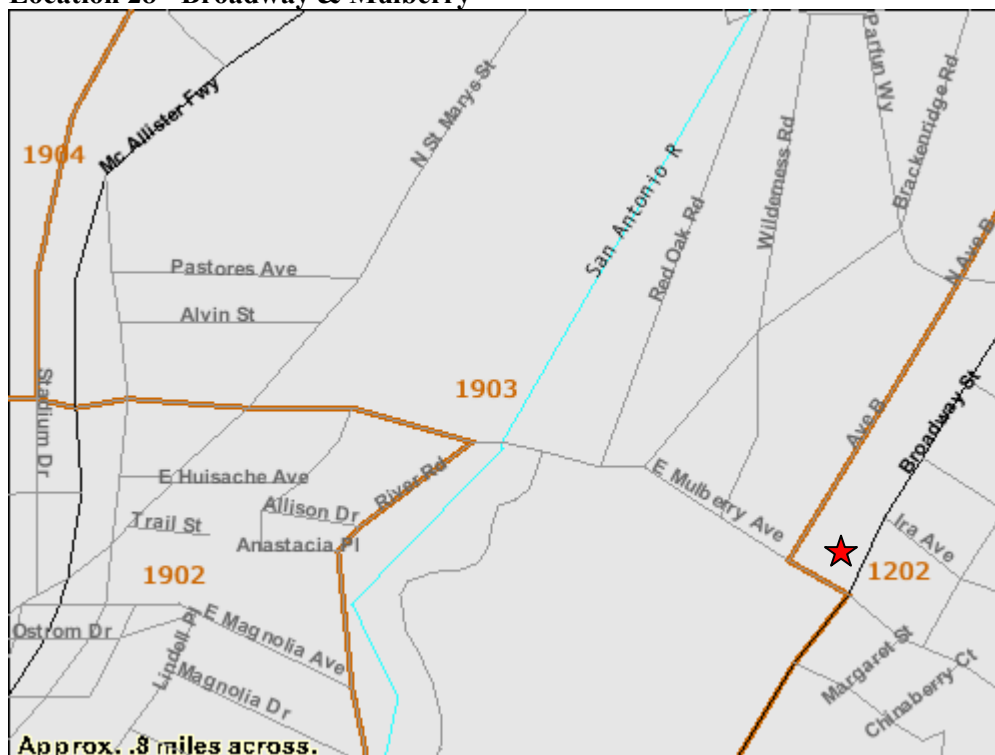
Location 26 - Pin Oak & Oaklawn



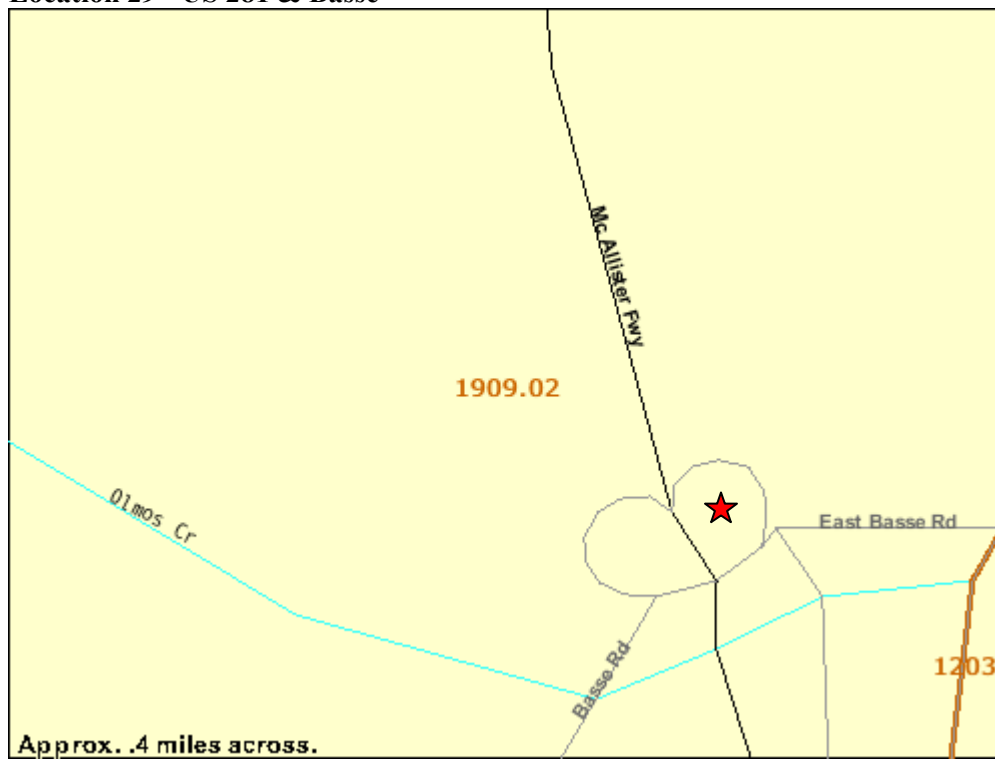
Location 27 - I-10 & Vance Jackson



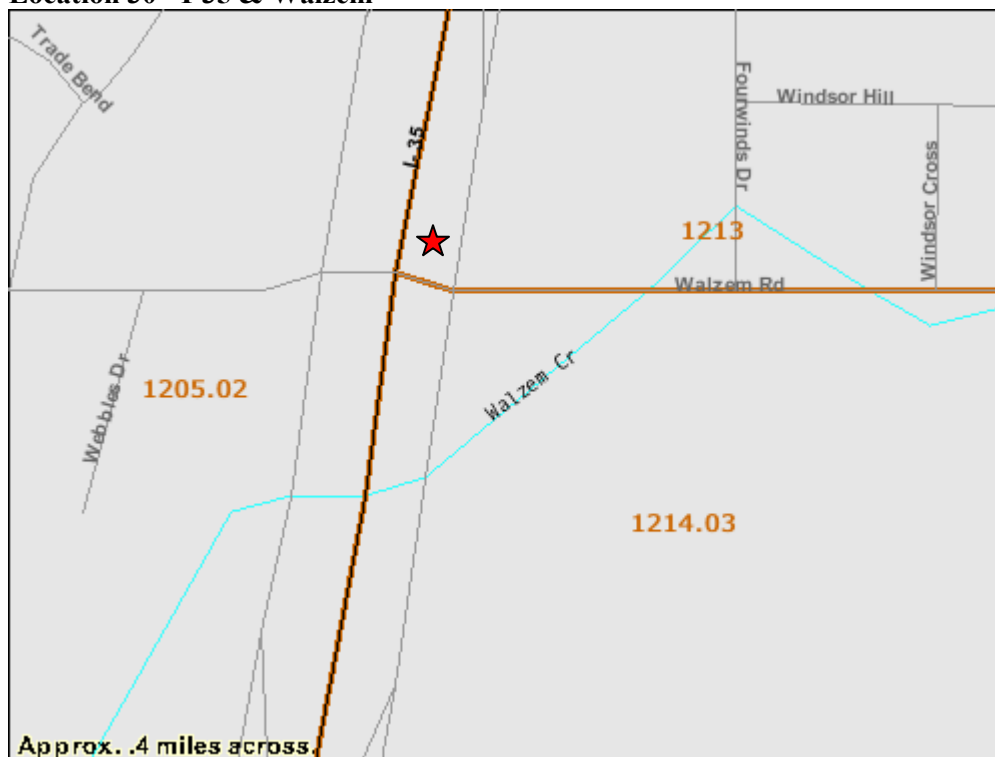
Location 28 - Broadway & Mulberry

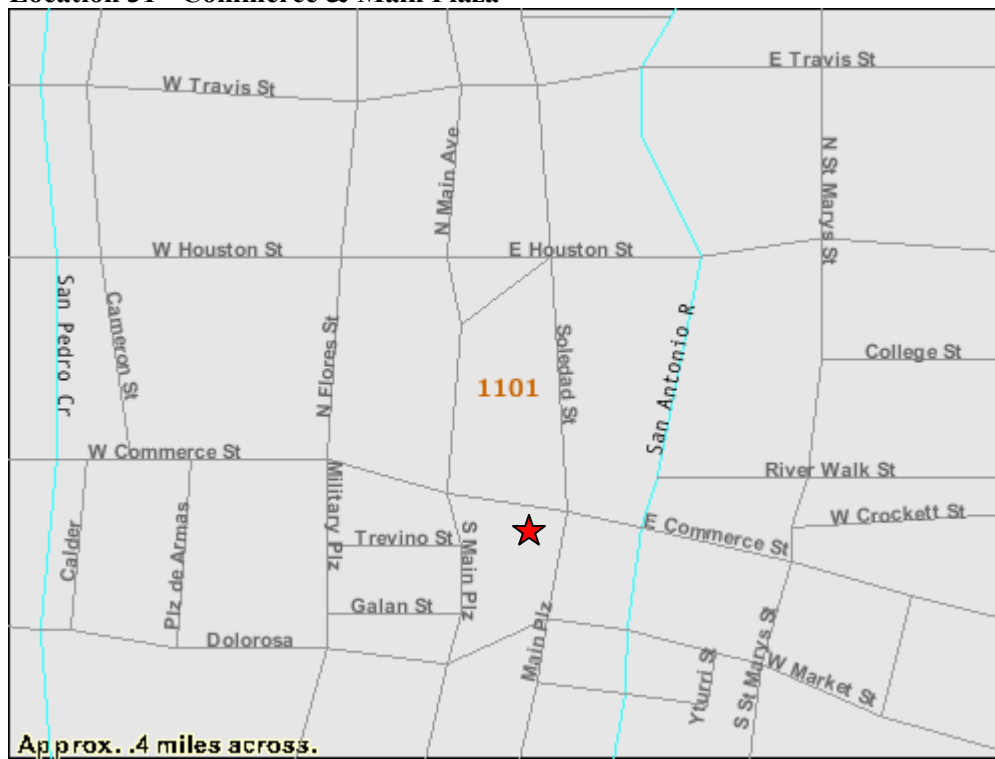


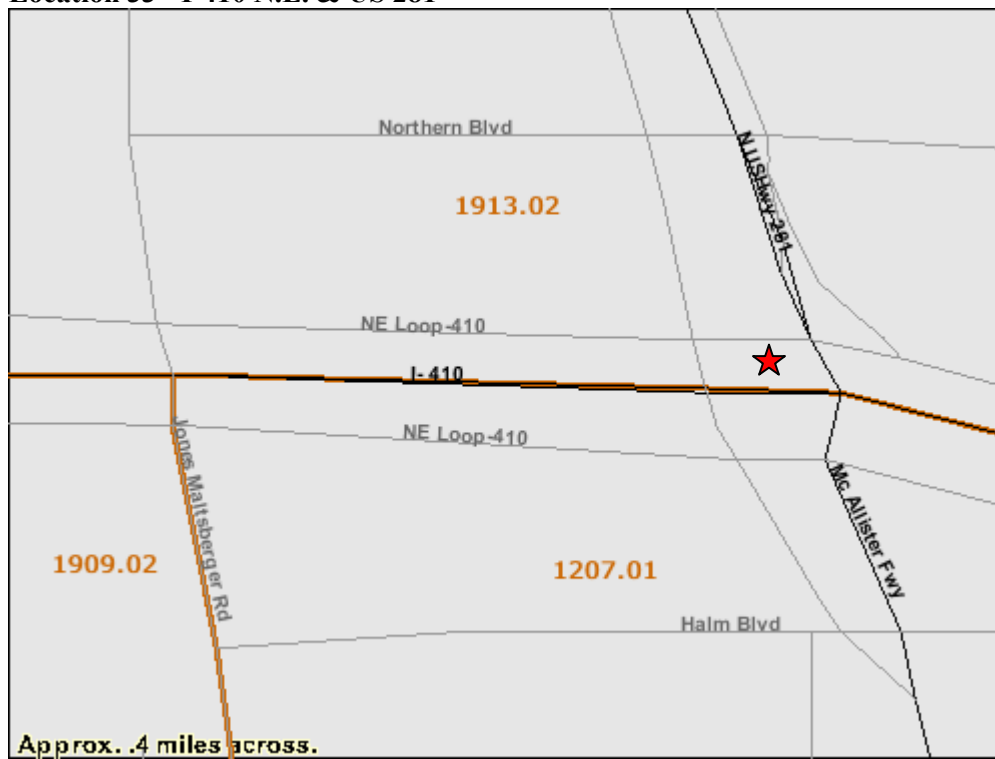
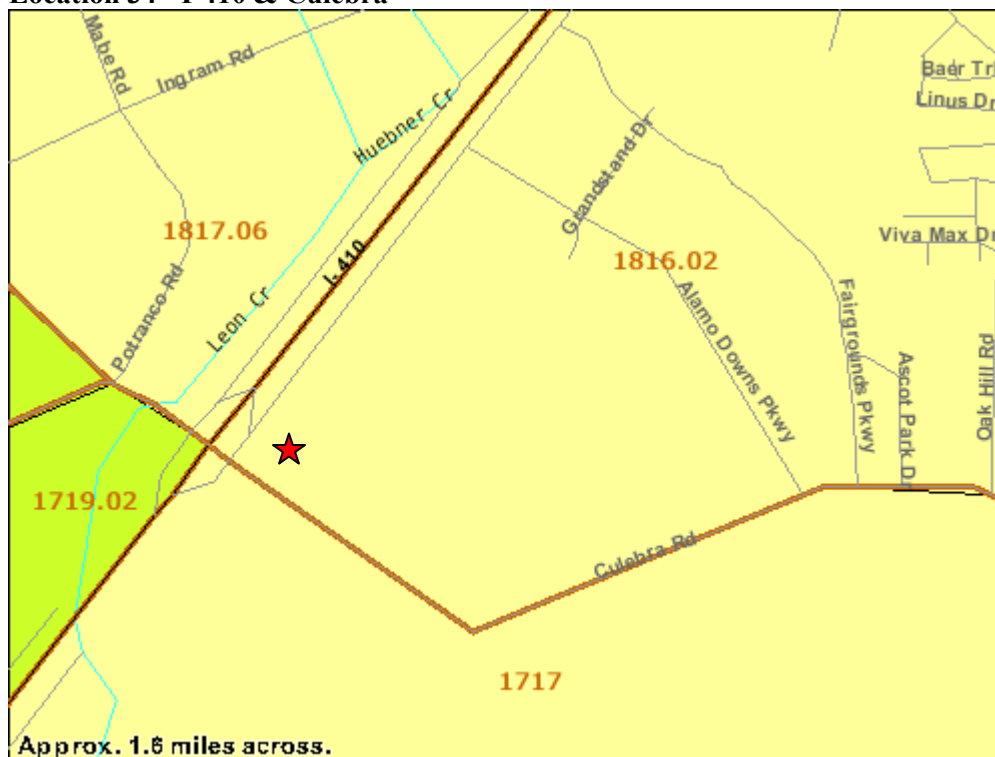
Location 29 - US 281 & Basse

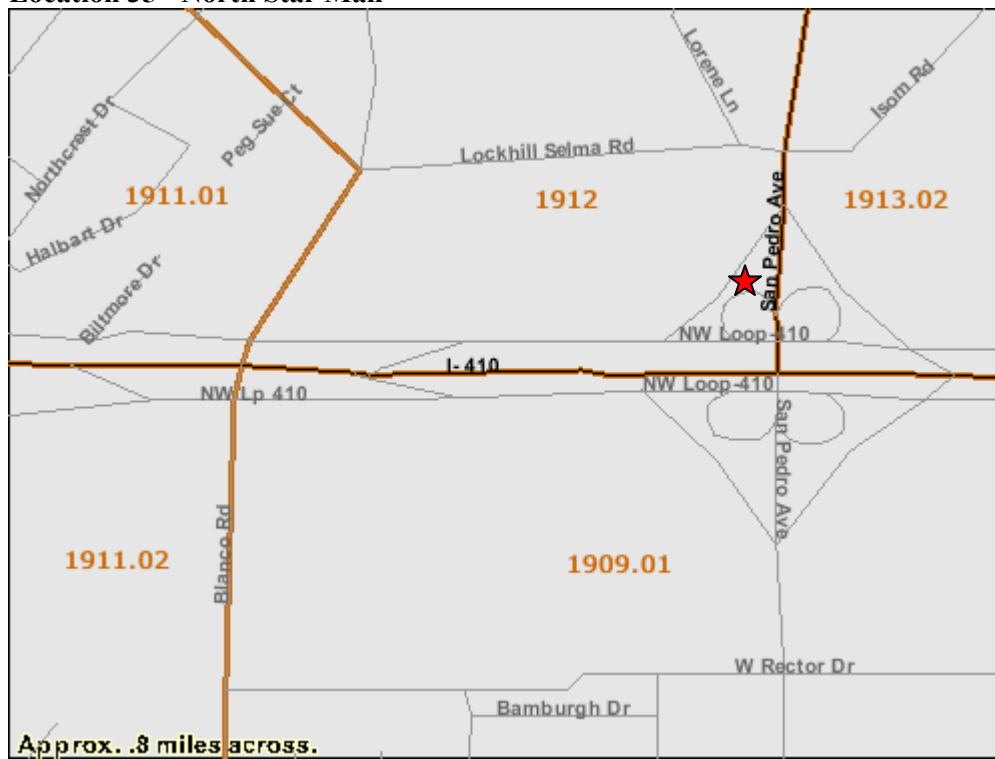
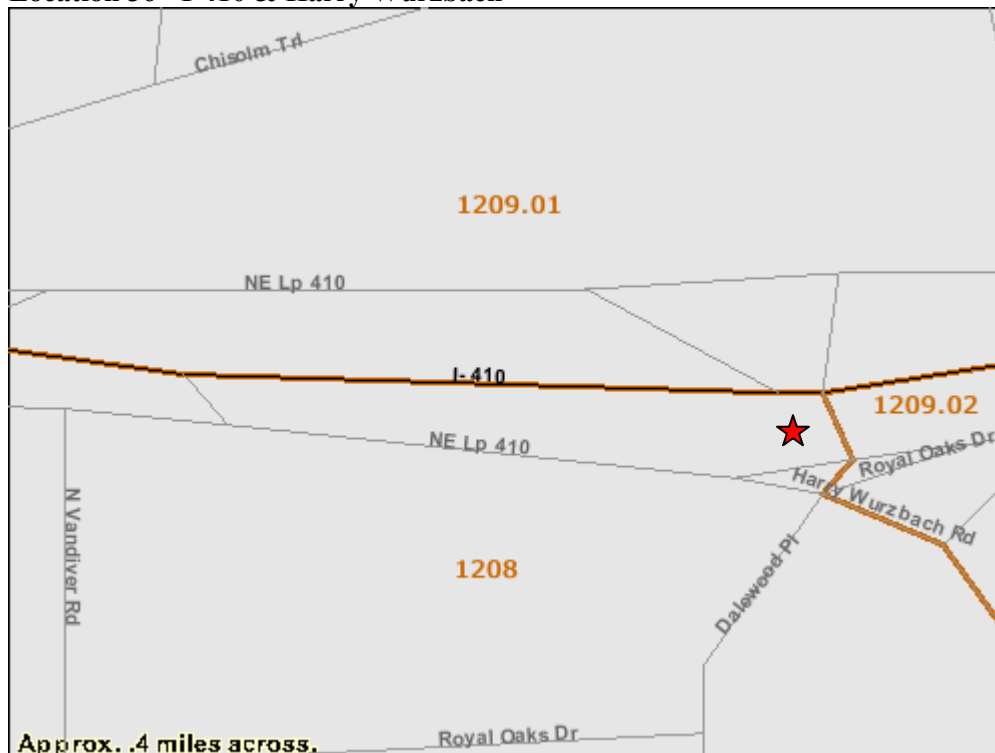


Location 30 - I-35 & Walzem

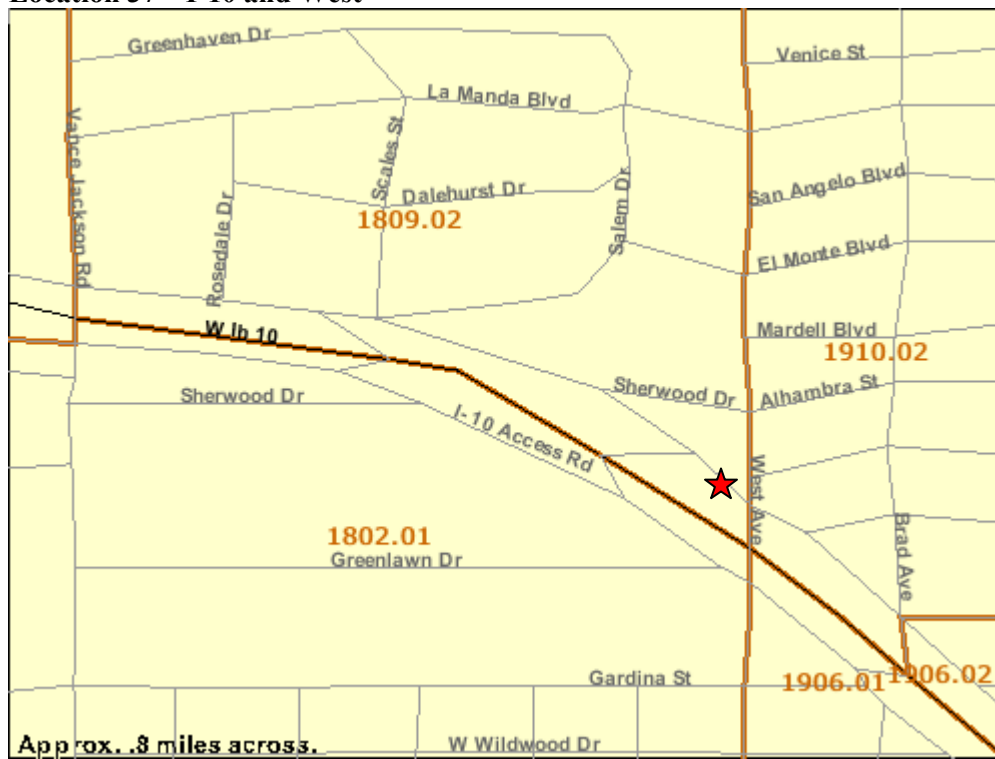


Location 31 - Commerce & Main Plaza**Location 32 - W. Commerce & Gen. McMullen**

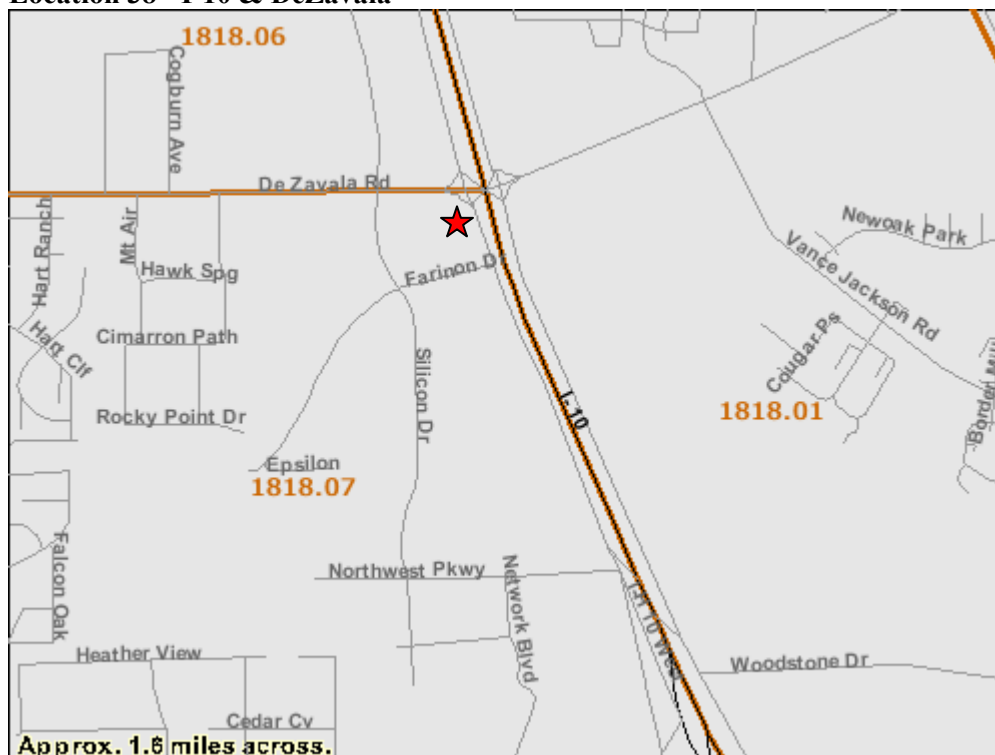
Location 33 - I-410 N.E. & US 281**Location 34 - I-410 & Culebra**

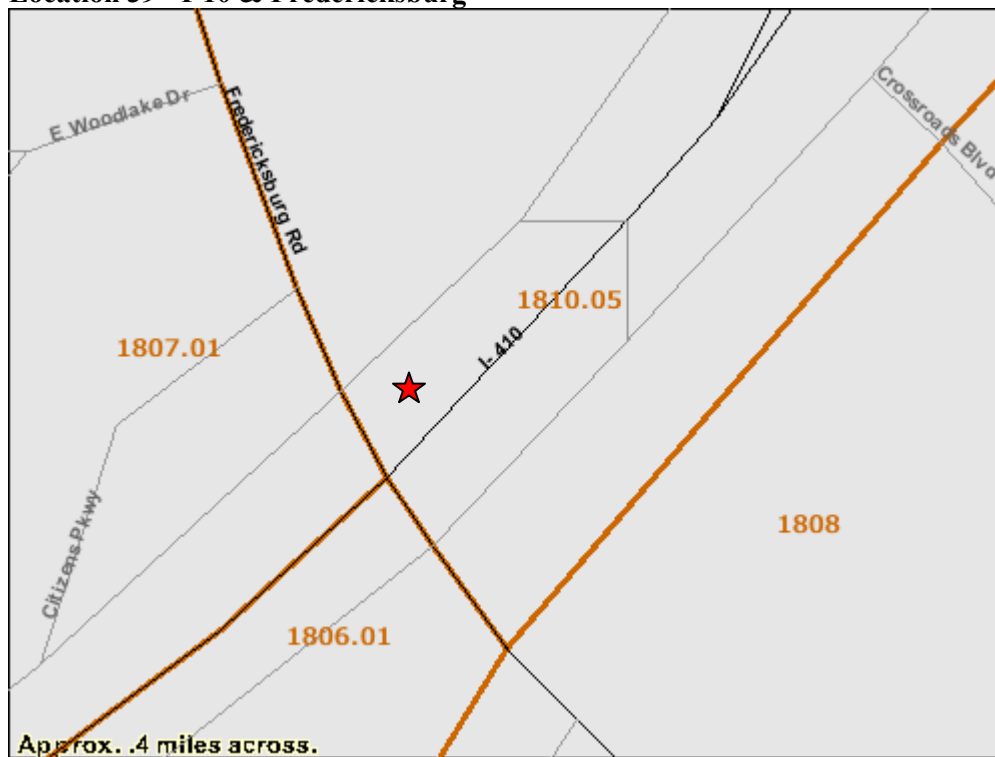
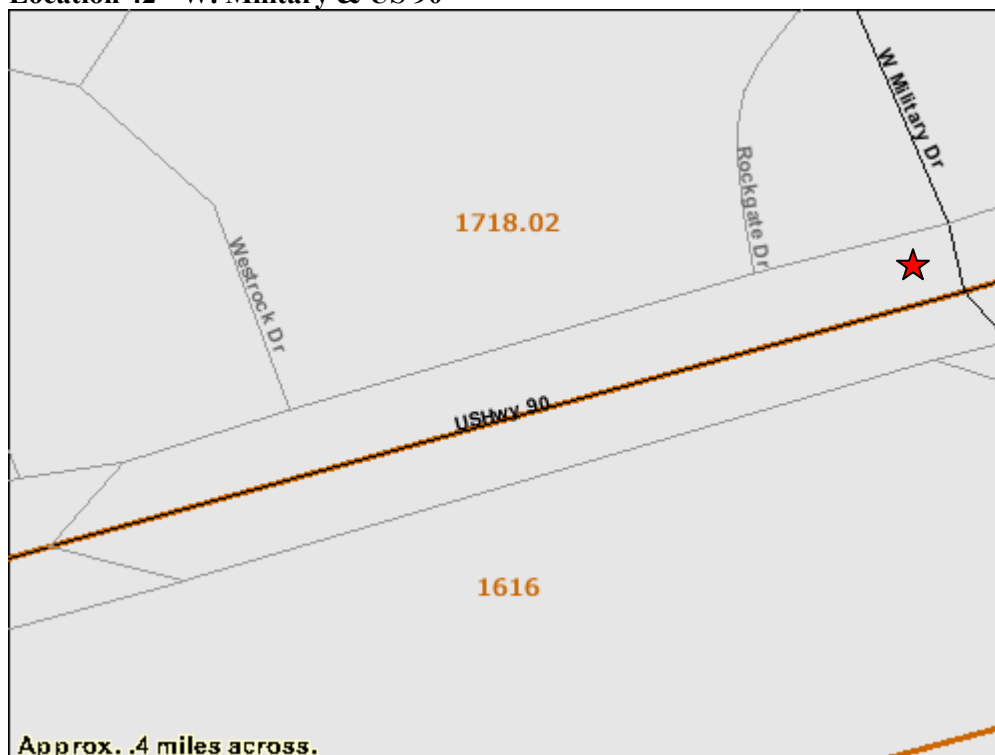
Location 35 - North Star Mall**Location 36 - I-410 & Harry Wurzbach**

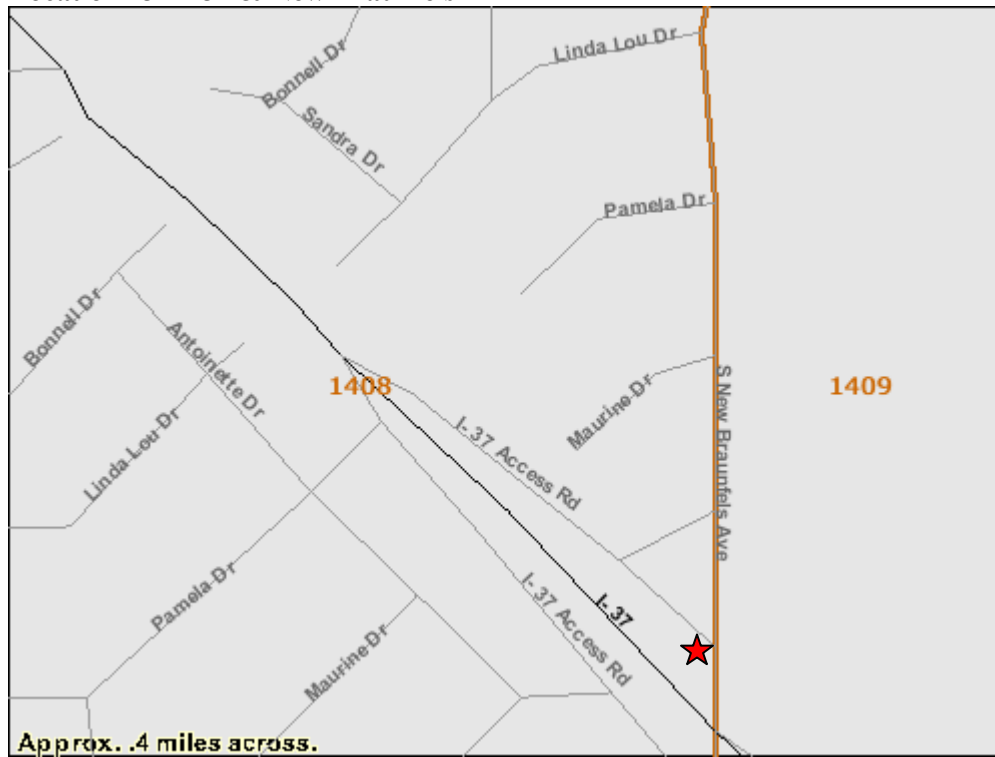
Location 37 – I-10 and West



Location 38 - I-10 & DeZavala



Location 39 - I-10 & Fredericksburg**Location 42 - W. Military & US 90**

Location 43 - I-37 & New Braunfels

This project was supported by grant #2002HSWX0032 from the U.S. Department of Justice Office of Community Oriented Policing Services. Point of view or opinions contained in this document are those of the author and do not necessarily represent the official position or policies of the U.S. Department of Justice.